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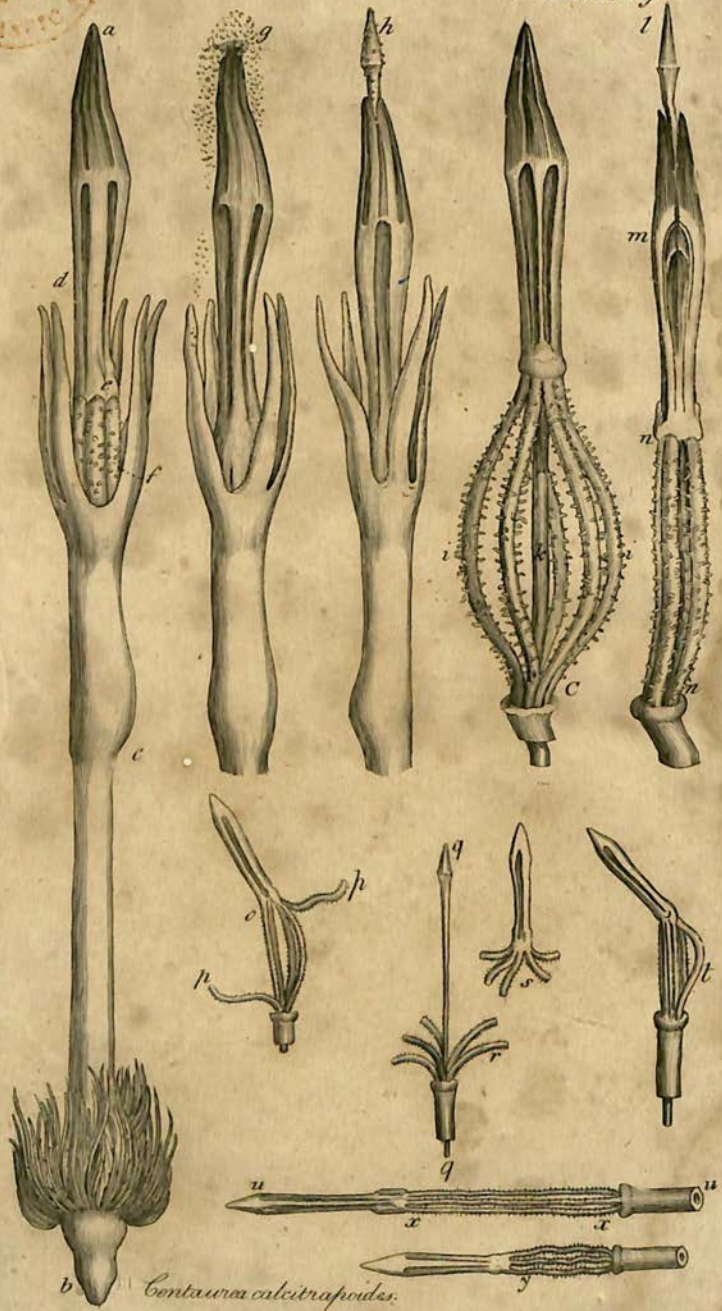

Centaurea calcitrapoides.

LITERARY LIFE

AND

SELECT WORKS

OF

BENJAMIN STILLINGFLEET,

SEVERAL OF WHICH HAVE

NEVER BEFORE BEEN PUBLISHED.

ILLUSTRATED WITH PLATES.

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VOL. II. PART I.

POETRY AND NATURAL HISTORY.

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TO

THE SECOND VOLUME.

THE Selection which is here given to the public, consists partly of original works, and partly of translations. Of the original works, those which have not been before given to the public, are distinguished in the table of Contents by an asterisk: the reasons for the selection of the others will appear in the Preface and in the Life.

The Works are divided into Poetical and Natural History.

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A POETICAL EPISTLE

TO A FRIEND.

WRITTEN IN 1723.

LONG has my soul in vain with Beauty strove,
And vanquish'd Reason often stoop'd to Love;
In me no arrows have resistance found,
And Cupid never shot, but sure to wound.
At length to books and friendly ease retir'd,
Warm'd with no passion, by no mistress fir'd;
To you, dear friend, my Muse in humble lays,
Attempts the business of her happier days.
For of what use do all our pleasures prove
Hid in ourselves, and kept from him we love?

No haughty porter waits my humble gate,
Secure without the pageantry of state;
No ivory doors are in my cottage known,
Nor golden pillars press'd with polish'd stone;

No levees my calm morning thoughts pursue
With flattering sounds, and praises not my due;
No long retinue does my footsteps grace,
Wait on my looks, and live upon my face;
Yet blest with leisure and obscurity,
Who lives so pleas'd and so secure as I?

What tho' my fortunes are by fate confin'd,
My soul no limit knows, and free my mind:
The various scenes of life, the change of fate,
Shows to be happy is not to be great.
Who is it that we great or happy call,
He that enjoys or that possesses all?
If he, whose fancy's warm'd with gay desires,
Whose wit is poignant, and whose satire fires;
If he, who spends in luxury the day,
Shines in the ball, and sparkles in the play,
Be happy, be it so; while gently I
In my belov'd retreat securely lie,
All to be wish'd, without a taste of woe,
I have; or what's as good, I fancy so.
The fleeting pleasures of an ill-spent life,
Th' uneasy glories of a worldly strife,
With all the certain ills the mighty see,
Touch not my little tenement nor me;
Within this blissful seat, and humble cell,
Eternal peace and sacred silence dwell.
When night with sable curtain veils the day,
And drives with awful shades the light away,

Sleep does my eyes with easy fetters close,
And gentle slumbers soften my repose.
If e'er my wandering fancy chance to stray,
And to some unknown region wing her way;
No hideous spectre haunts the pleasing dream;
But some fair flowery mead, or purling stream,
Some shady grot, or everlasting grove,
The soft retreats of innocence and love;
Or some fair nymph, on tender moss reclin'd,
Leaves a delightful picture on my mind.

The sleeping hero, overcome with care
Of conquering nations, and the spoils of war,
Rushes impetuous to the distant plain,
And fights his painful battles o'er again.
The monarch, softly laid on beds of down,
Charm'd with the gaudy titles of a crown,
Deluded now his fancy'd honours mourns,
And fear and majesty prevail by turns;
From clime to clime his absent senses go,
And each new clime presents an unknown foe.

With some small volumes is my study grac'd,
For use, not ornament, in order plac'd.
Here Milton soars on high-aspiring wings,
And our first Sire in heavenly numbers sings;
Here Homer's army darkens all the plain,
And Waller charms us in a softer strain;
Here Ovid does the fate of lovers tell,
And paints the passion that he knew too well:

Or else sad Philomel her story sings
To murmuring brooks and even-flowing springs.
These are the friends I cherish: for the rest,
Whom oft we make the partners of our breast,
Imperfect, have their faults; but such as these
Shine with new lustre, and are sure to please.

When hunger calls, not sooner, a repast
Of cooling herbs or wholesome fruits I taste:
No flowery wreaths my joyful temples bind,
Nor with my hairs are purple roses twin'd;
By me no vines with swelling clusters grow,
Nor fragrant bowls of mighty Nectar flow:
The drink that sooths my pain, and life revives,
Is what the stream of some cool fountain gives.
Thus were with health our first forefathers blest,
When want, not luxury, prepar'd the feast.
And thus, ere licencé in the court begun,
And nauseous draughts of physick were unknown.
'Twas then Disease, with all her sickly train,
Kindly withdrew, and left the happy plain:
No gouty foot the velvet slipper grac'd;
They know no pain who temperate pleasures taste.
No mother by debauches lost her son,
No wither'd beaus bewail'd their vigour gone;
But endless peace and joy were wedded there,
And sweet contentment crown'd the gentle pair.

But why presumes my infant Muse to tell
A trifling tale to you, who sing so well?

Whose tuneful notes can heroes' deeds rehearse,
Make Harley's greatness live, and Prior's verse;
Otway to you his lasting honour owes,
While in your lays his goodness gently flows.
Long may this sacred fire thy bosom warm,
Long may thy wit improve, and music charm!
And when thy soul, from that dull mansion free,
Shall her own native skies ascend and see,
May such another rise to sing of thee!

VERSES

OCCASIONED BY THE TWO FOLLOWING LINES IN A POEM OF MR. TALEUR'S:

"And should she yield, who once said Nay;
"I'd turn my back, and walk away."

'TIS nobly said, my Friend; what! be enslav'd
To the fond threats of inconsistent Woman!
Court empty smiles, or tremble at vain frowns,
By turns succeeding, like the troubled waves,
Which rise this moment to the fleeting wind,
Then straight beneath their usual level sink!
Let causes light as this and as inconstant
Govern their frowns and smiles, but not our joys:
I'd rather be for centuries expos'd
To nipping winds on the soul-bleaching plains
Of grizly Pluto, till contractive cold
Had pinch'd me to a point; or rarified

By heat, till every nerve, and every pore,
Stretch'd to the utmost limits of expansion,
Were just prepar'd to burst, like the thin air
On the top atmosphere, where matter 'gins
To melt away, and lose itself in nothing.
Imperious Woman! trifling half-existence!
Made of the shavings of a nobler form,
Shall she pretend to lord it over Man!
What! doth she hope, perch'd on the stilts of Vanity,
To outstrut Nature! Sooner the low shrub
Shall overtop the tall cloud-piercing pine,
Or human laws arrest the wandering planets
As in their orbs they roll; much rather learn,
Frail Woman, to submit, and spread no more
Thy swelling top-sails to the fluttering gales
Puff'd from the bloated cheeks of Self-conceit.
Learn from the Eastern females to adore,
Who stoop with joy to catch the handkerchief
Dropp'd by their gracious lord. The happy she,
Envied by all who find it at her feet;
The rest withdraw, and, like the race of insects
Debarr'd the cheering sun, incline their heads,
And seek the sable mantle of oblivion.

Thus o'er the banks my passion boil'd,
Till Cælia to my mind arose;
She all my noble projects spoil'd,
My blood shrunk back, and almost froze.

So vaunts the madman in his cell,
Angry at some imagin'd slave,
Who durst dispute his royal will,
Who durst his dreadful fury brave;

With stately step he now prepares
The saucy phantom to chastise;
But, if the keeper's voice he hears,
Down tamely on the straw he lies.

AN ESSAY

ON

CONVERSATION.

FROM DODSLEY'S COLLECTION OF POEMS.

Oderunt hilarem tristes tristemque jocosi,
Sedatum celeres, agilem gnavumque remissi. Hor.

AN ESSAY

ON

CONVERSATION.

THE art of Converse, how to sooth the soul
Of haughty man, his passions to controul,
His pride at once to humble and to please,
And join the dignity of life with ease,
Be now my theme. O thou, whom Nature's hand
Fram'd for this best, this delicate command,
And taught, when lisping without Reason's aid,
At the same time to speak and to persuade;
Wyndham, with diligence awhile attend,
Nor scorn th' instructions of an older friend;
Who when the world's great commerce shall have join'd
The deep reflection, and the strength of mind,
To the bright talents of thy youthful state,
In turn shall on thy better lessons wait.

Whence comes it, that in every art we see
Many can rise to a supreme degree;

Yet in this art, for which all seem design'd,
By nature, scarcely one complete we find?
You 'll say, perhaps, we think, we speak, we move,
By the strong springs alone of selfish love:
Yet among all the species, 'is there one,
Whom with more caution than ourselves we shun?
What is it fills a puppet-show or court?
Go none but for the profit or the sport?
If so, why comes each soul fatigu'd away,
And curses the dull puppets same dull play;
Yet, unconvinc'd, is tempted still to go?
'Tis that we find at home our greatest foe.
And reason good why solitude we flee;
Can wants with self-sufficiency agree?

Yet, such our inconsistency of mind,
We court society, and hate mankind.
With some we quarrel, for they 're too sincere;
With others, for they 're close, reserv'd, and queer:
This is too learn'd, too prudent, or too wise;
And that we for his ignorance despise.
A voice perhaps our ear shall harshly strike,
Then strait ev'n wit itself shall raise dislike;
Our eye may by some feature be annoy'd,
Behold at once a character destroy'd,
One 's so good-natur'd, he 's beyond all bearing,
He 'll ridicule no friend, though out of hearing:
Another, warm'd with zeal, offends our eyes,
Because he holds the mirror up to Vice.
No wonder then, since fancies wild as these
Can move our spleen, that real faults displease.

When Mævius, spite of dulness, will be bright,
And teach Argyll * to speak, and Swift to write;
When Flavia entertains us with her dreams,
And Macer with his no less airy schemes;
When peevishness, and jealousy, and pride,
And int'rest that can brother hearts divide,
In their imagin'd forms our eye-sight hit,
Of an old maid, a poet, peer, or cit;
Can then, you 'll say, Philosophy refrain,
And check the torrent of each boiling vein?
Yes. She can still do more; view passion's slave
With mind serene, indulge him, and yet save.

But Self-conceit steps in, and with strict eye
Scans every man, and every man awry;
That reigning passion, which through every stage
Of life, still haunts us with unceasing rage.
No quality so mean, but what can raise
Some drudging driveling candidate for praise;
Ev'n in the wretch, who wretches can despise,
Still Self-conceit will find a time to rise.

* This was John Duke of Argyll, who is so justly celebrated for his eloquence by the contemporary poets. Pope says of him:

"Argyll, the state's whole thunder born to wield,
"And shake alike the senate and the field."

And Thomson:

——— "From his rich tongue
"Persuasion flows, and wins the high debate."

He died in 1743. His singular character, and chequered political life, are given in the "Memoirs of Sir Robert Walpole," vol. I. ch. 53.

Quintus salutes you with forbidding face,
And thinks he carries his excuse in lace.
You ask why Clodius bullies all he can?
Clodius will tell you, he's a gentleman.
Myrtilla struts and shudders half the year,
With a round cap, that shews a fine-turn'd ear;
The lowest jest makes Delia laugh to death;
Yet she's no fool, she has only handsome teeth.
Ventoso lolls, and scorns all human kind,
From the gilt coach with four lac'd slaves behind;
Does all this pomp and state proceed from merit?
Mean thought! he deems it nobler to inherit:
While Fopling from some title draws his pride,
Meanless, or infamous, or misapply'd;
Free-mason, rake, or wit, 'tis just the same,
The charm is hence, he has gain'd himself a name.
Yet, spite of all the fools that Pride has made,
'Tis not on man an useless burthen laid;
Pride has ennobled some, and some disgrac'd;
It hurts not in itself, but as 't is plac'd;
When right, its view knows none but Virtue's bound;
When wrong, it scarcely looks one inch around.
Mark! with what care the fair-one's critic eye
Scans o'er her dress, nor lets a fault slip by;
Each rebel hair must be reduc'd to place
With tedious skill, and tortur'd into grace;
Betty must o'er and o'er the pins dispose,
Till into modish folds the drapery flows;
And the whole frame is fitted to express
The charms of decency and nakedness.

Why all this art, this labour'd ornament?
To captivate, you 'll cry, no doubt, 'tis meant.
True. But let 's wait upon this fair machine
From the lone closet to the social scene;
There view her loud, affected, scornful, sour,
Paining all others, and herself still more.
What means she, at one instant to disgrace
The labour of ten hours, her much-lov'd face?
Why, 'tis the self-same passion gratify'd;
The work is ruin'd, that was rais'd by pride.

Yet of all tempers, it requires least pain,
Could we but rule ourselves, to rule the vain.
The prudent is by Reason only sway'd,
With him each sentence and each word is weigh'd;
The gay and giddy can alone be caught
By the quick lustre of a happy thought;
The miser hates, unless he steals your pelf;
The prodigal, unless you rob yourself;
The lewd will shun you, if your wife prove chaste;
The jealous, if a smile on his be cast:
The steady or the whimsical will blame,
Either because you 're not, or are the same;
The peevish, sullen, shrewd, luxurious, rash,
Will with your virtue, peace, or interest, clash.
But mark the proud man's price, how very low!
'Tis but a civil speech, a smile, or bow.

Ye who, push'd on by noble ardour, aim
In social life to gain immortal fame,

Observe the various passions of mankind,
General, peculiar, single, or combin'd:
How youth from manhood differs in its views,
And how old age still other paths pursues;
How zeal in Priscus nothing more than heats,
In Codex burns, and ruins all it meets;
How freedom now a lovely face shall wear,
Now shock us in the likeness of a bear;
How jealousy in some resembles hate,
In others, seems but love grown delicate;
How modesty is often pride refin'd,
And virtue but the canker of the mind;
How love of riches, grandeur, life, and fame,
Wear different shapes, and yet are still the same.

But not our passions only disagree,
In taste is found as great variety.
Sylvius is ravish'd when he hears a hound,
His lady hates to death the odious sound:
Yet both love music, though in different ways;
He in a kennel, she at operas.
A florist shall, perhaps, not grudge some hours,
To view the colours in a bed of flowers;
Yet, shew him Titian's workmanship divine,
He passes on, and only cries, 'tis fine.
A rusty coin, an old worm-eaten post,
The mouldy fragment of an author lost;
A butterfly, an equipage, a star,
A globe, a fine lac'd hat, a china jar;

A mistress, or a fashion, that is new,
Have each their charms, though felt but by a few.

Then study each man's passion and his taste,
The first to soften, and indulge the last:
Not like the wretch, who beats down virtue's fence,
And deviates from the paths of common sense;
Who daubs with fulsome flattery, blind and bold,
The very weakness we with grief behold.
Passions are common to the fool and wise,
And all would hide them under art's disguise;
For so avow'd, in others, is their shame,
None hates them more, than he who has the same.
But taste seems more peculiarly our own,
And every man is fond to make his known;
Proud of a mark he fancies is design'd
By nature to advance him o'er his kind;
And where he sees that character impress'd,
With joy he hugs the favourite to his breast.

But the main stress of all our cares must lie,
To watch ourselves with strict and constant eye;
To mark the working mind, when passion's course
Begins to swell, and reason still has force;
Or, if she 's conquer'd by the stronger tide,
Observe the moments when they first subside.
For he who hopes a victory to win
O'er other men, must with himself begin;
Else like a town by mutiny oppress'd,
He's ruin'd by the foe within his breast;

And they alone, who in themselves oft view
Man's image, know what method to pursue.

All other creatures keep in beaten ways,
Man only moves in an eternal maze.
He lives and dies, not tam'd by cultivation,
The wretch of reason and the dupe of passion;
Curious of knowing, yet too proud to learn;
More prone to doubt, than anxious to discern:
Tir'd with old doctrines, prejudic'd at new;
Mistaking still the pleasing for the true;
Foe to restraints approv'd by gen'ral voice,
Yet to each fool-born mode a slave by choice.
Of rest impatient, yet in love with ease;
When most good-natur'd, aiming how to teaze;
Disdaining by the vulgar to be aw'd,
Yet never pleas'd but when the fools applaud;
By turns severe, indulgent, humble, vain;
A trifle serves to lose him or to gain.

Then grant this trifle, yet his vices shun,
Not like to Cato or to Clinias'* son:
This for each humour every shape could take,
Ev'n Virtue's own, though not for Virtue's sake;
At Athens rakish, thoughtless, full of fire,
Severe at Sparta, as a Chartreux friar;
In Thrace, a bully, drunken, rash, and rude;
In Asia gay, effeminate, and lewd.

* Alcibiades.

While the rough Roman, virtue's rigid friend,
Could not to save the cause he died for bend;
In him 'twas scarce an honour to be good,
He more indulg'd a passion than subdu'd.

See how the skilful lover spreads his toils,
When eager in pursuit of beauty's spoils!
Behold him bending at his idol's feet;
Humble, not mean; disputing, and yet sweet;
In rivalship not fierce, nor yet unmov'd;
Without a rival studious to be lov'd;
For ever cheerful, though not always witty,
And never giving cause for hate or pity.
These are his arts, such arts as must prevail,
When riches, birth, and beauty's self will fail:
And what he does to gain a vulgar end,
Shall we neglect, to make mankind our friend?

Good sense and learning may esteem obtain;
Humour and wit a laugh, if rightly ta'en;
Fair virtue admiration may impart;
But 'tis good-nature only wins the heart:
It moulds the body to an easy grace,
And brightens every feature of the face;
It smooths th' unpolish'd tongue with eloquence,
And adds persuasion to the finest sense.
Yet this, like every disposition, has
Fixt bounds, o'er which it never ought to pass;
When stretch'd too far, its honour dies away,
Its merit sinks, and all its charms decay:

Among the good it meets with no applause,
And to its ruin the malicious draws:
A slave to all, who force it, or entice,
It falls by chance in virtue or in vice.
'Tis true, in pity for the poor it bleeds,
It cloaths the naked, and the hungry feeds;
It cheers the stranger, nay its foe defends,
But then as often injures its best friends.

Study with care Politeness, that must teach
The modish forms of gesture and of speech.
In vain Formality, with matron mien,
And Pertness apes her with familiar grin:
They against nature for applauses strain,
Distort themselves, and give all others pain:
She moves with easy, though with measur'd pace,
And shews no part of study but the grace.
Yet ev'n by this man is but half refin'd,
Unless philosophy subdues the mind;
'Tis but a varnish that is quickly lost,
Whene'er the soul in passion's sea is tost.

Would you both please and be instructed too,
Watch well the rage of shining to subdue;
Hear every man upon his fav'rite theme,
And ever be more knowing than you seem.
The lowest genius will afford some light,
Or give a hint that had escap'd your sight;
Doubt, till he thinks you on conviction yield,
And with fit questions let each pause be fill'd.

And the most knowing will with pleasure grant,
You 're rather much reserv'd, than ignorant.

The rays of wit gild wheresoe'er they strike,
But are not therefore fit for all alike;
They charm the lively, but the grave offend,
And raise a foe as often as a friend;
Like the resistless beams of blazing light,
That cheer the strong, and pain the weakly sight.
If a bright fancy therefore be your share,
Let judgment watch it with a guardian's care;
'Tis like a torrent apt to overflow,
Unless by constant government kept low;
And ne'er inefficacious passes by,
But overturns or gladdens all that's nigh.
Or else, like trees, when suffer'd wild to shoot,
That put forth much, but all unripen'd fruit;
It turns to affectation and grimace,
As like to wit, as dullness is to grace.

How hard soe'er it be to bridle wit,
Yet mem'ry oft no less requires the bit!
How many, hurried by its force away,
For ever in the land of gossips stray!
Usurp the province of the nurse to lull,
Without her privilege for being dull!
Tales upon tales they raise ten stories high,
Without regard to use or symmetry:

So Ripley*, till his destin'd space is fill'd,
Heaps bricks on bricks, and fancies 'tis to build.
A story should, to please, at least seem true,
Be à-propos, well told, concise, and new;
And whensoe'er it deviates from these rules,
The wise will sleep, and leave applause to fools.
But others, more intolerable yet,
The waggeries, that they 've said, or heard, repeat;
Heavy by mem'ry made, and what's the worst,
At second-hand as often as at first.
And can ev'n patience hear, without disdain,
The maiming register of sense once slain?
While the dull features, big with archness, strive
In vain, the forc'd half-smile to keep alive.

* He alludes probably to Ripley, an architect whom it was the fashion to abuse. He is thus satirized by Pope:

"Heaven visits with a taste the wealthy fool,
"And needs no rod but Ripley with a rule."
Moral Essays, Ep. 4. v. 18.

And again,

"Who builds a bridge that never drove a pile,
"Should Ripley venture all the world would smile."

The late lord Orford in his Anecdotes of Painting speaks more favourably of this Architect, who was employed by Sir Robert Walpole, and by Lord Walpole in building Wolterton. "Both of these," he says, "will, as long as they remain, acquit the artist of the charge of ignorance." Anecdotes of Painting, art. *Thomas Ripley*.

There is a good portrait of Ripley at Wolterton. Being patronized by Sir Robert Walpole he was the butt of the Opposition Wits; and it cannot be denied that the Admiralty, and some of his other public buildings, gave some scope to their raillery.

Some know no joy like what a word can raise,
Haul'd through a language's perplexing maze;
'Till on a mate, that seems t'agree, they light,
Like man and wife, that still are opposite.
Not lawyers at the bar play more with sense,
When brought to the last trope of eloquence;
Than they on every subject, great or small,
At clubs, or councils, at a church or ball;
Then cry we rob them of their tributes due;
Alas! how can we laugh and pity too?

While others to extremes as wild will run,
And with sour face anatomize a pun;
When the brisk glass to freedom does entice,
And rigid wisdom is a kind of vice.
But let not such grave fops your laughter spoil;
Ne'er frown where sense may innocently smile.

Cramp not your language into logic rules,
To rostrums leave the pedantry of schools;
Nor let your learning always be discern'd,
But chuse to seem judicious more than learn'd.
Quote seldom, and then let it be, at least,
Some fact that's prov'd, or thought that's well express'd
But lest, disguis'd, your eye it should escape,
Know, pedantry can put on every shape:
For when we deviate into terms of art,
Unless constrain'd, we act the pedant's part.
Or if we're ever in the self-same key,
No matter of what kind the subject be,

From laws of nations down to laws of dress,
For statesmen have their cant, and belles no less:
As good hear Bentley* dictate on epistles,
Or Burman† comment on the Grecian whistles;
As old Obesus preach upon his belly,
Or Phileunucha rant on Farinelli;
Flirtilla read a lecture on a fan,
Or W——d set forth the praise of Kouli-Khan.

But above all things raillery decline,
Nature but few does for that task design:
'Tis in the ablest hand a dang'rous tool,
But never fails to wound the meddling fool;

* The author here alludes to the famous controversy between Bentley and the Hon. Charles Boyle, concerning the authenticity of the Epistles of Phalaris; in which, however, Bentley was completely victorious, though his opponent was assisted by Dean Swift, Dr. Aldridge, and the greatest Wits of the times.

Mr. Boyle was afterwards known as Earl of Orrery, to which title he succeeded. For an account of this singular controversy see the Biographia Britannica, art. *Bentley*, and *Boyle, Charles, Earl of Orrery*.

The prejudices which Mr. Stillingfleet had justly conceived against Bentley were so strong, that, like many of his contemporaries, he did not give due weight to the merits of the dogmatic and violent, but great Critic.

† Peter Burman, Professor of History and Eloquence at the University of Leyden, was remarkable for his classical knowledge. He published an ironical oration against the study of the antient languages; and this effusion having been warmly approved by Bentley as an excellent piece of irony in the manner of Lucian, procured the learned Professor a place by the side of the no less learned Critic.

For all must grant, it needs no common art
To keep men patient, when we make them smart.
Not wit alone, nor humour's self, will do,
Without good-nature, and much prudence too,
To judge aright of persons, place, and time;
For taste decrees what's low, and what's sublime:
And what might charm to-day, or o'er a glass,
Perhaps at court, or next day, would not pass.
Then leave to low buffoons, by custom bred,
And form'd by nature to be kick'd and fed,
The vulgar and unenvied task, to hit
All persons, right or wrong, with random wit.
Our wise forefathers, born in sober days,
Resign'd to fools the tart and witty phrase;
The motley coat gave warning for the jest,
Excus'd the wound, and sanctified the pest:
But we from high to low all strive to sneer,
Will all be wits, and not the livery wear.

Of all the qualities that help to raise
In men the universal voice of praise,
Whether in pleasure or in use they end,
There 's none that can with modesty contend.
'Tis a transparent veil that helps the sight,
And lets us look on merit with delight:
In others, 'tis a kindly light, that seems
To gild the worst defects with borrow'd beams.
Yet 'tis but little that its form be caught,
Unless its origin be first in thought:

Else rebel nature will reveal the cheat,
And the whole work of art at once defeat.

Hold forth upon yourself on no pretence,
Unless invited, or in self-defence;
The praise you take, although it be your due,
Will be suspected, if it come from you:
For each man, by experience taught, can tell
How strong a flatterer does within him dwell.
And if to self-condemning you incline,
In sober sadness, and without design;
(For some will slily arrogate a vice,
That from excess of virtue takes its rise)
The world cries out, why does he hither come?
Let him do penance for his sins at home.

No part of conduct asks for skill more nice,
Though none more common, than to give advice;
Misers themselves in this will not be saving,
Unless their knowledge makes it worth the having.
And where's the wonder, when we will obtrude
An useless gift, it meets ingratitude?
Shun then, unask'd, this arduous task to try;
But if consulted, use sincerity;
Too sacred is the welfare of a friend,
To give it up for any selfish end.
But use one caution, sift him o'er and o'er,
To find if all be not resolv'd before.
If such the case, in spite of all his art,
Some word will give the soundings of his heart;

And why should you a bootless freedom use,
That serves him not, and may his friendship lose?
Yet still on truth bestow this mark of love,
Ne'er to commend the thing you can't approve.
Sincerity has such resistless charms,
She oft the fiercest of our foes disarms;
No art she knows, in native whiteness dress'd,
Her thoughts all pure, and therefore all express'd:
She takes from error its deformity;
And without *her*, all other virtues die.
Bright source of goodness! to my aid descend,
Watch o'er my heart, and all my words attend;
If still thou deign to set thy foot below,
Among a race quite polish'd into show;
Oh! save me from the jilt's dissembling part,
Who grants to all, all favours but her heart;
Perverts the end of charming, for the fame;
To fawn, her business; to deceive, her aim.
She smiles on this man, tips the wink on that,
Gives one a squeeze, another a kind pat;
Now jogs a foot, now whispers in an ear;
Here slips a letter, and there casts a leer;
'Till the kind thing, the company throughout,
Distributes all its pretty self about;
While all are pleas'd, and wretched soon or late,
All but the wise, who see and shun the bait.

Yet if, as complaisance requires to do,
And rigid virtue sometimes will allow,

You stretch the truth in favour of a friend,
Be sure it ever aim at some good end;
To cherish growing virtue, vice to shame,
And turn to noble views the love of fame:
And not, like fawning parasites, unaw'd
By sense or truth, be every passion's bawd.

Be rarely warm in censure, or in praise;
Few men deserve our passion either ways;
For half the world but floats 'twixt good and ill,
As chance disposes objects, these the will.
'Tis but a see-saw game, where virtue now
Mounts above vice, and then sinks down as low.
Besides, the wise still hold it for a rule,
To trust that judgment most, that seems most cool;
For all that rises to hyperbole,
Proves that we err, at least in the degree.
But if your temper to extremes should lead,
Always upon th' indulging side exceed;
For though to blame most lend a willing ear,
Yet hatred ever will attend on fear;
And when a neighbour's dwelling blazes out,
The world will think 'tis time to look about.

Let not the curious from your bosom steal
Secrets, where Prudence ought to set her seal;
Yet be so frank and plain, that at one view,
In other things, each man may see you through;
For if the mask of policy you wear,
The honest hate you, and the cunning fear.

Would you be well receiv'd where'er you go,
Remember each man vanquish'd is a foe.
Resist not, therefore, with your utmost might,
But let the weakest think he's sometimes right;
He for each triumph you shall thus decline,
Shall give ten opportunities to shine:
He sees, since once you own'd him to excel,
That 'tis his interest you should reason well:
And though when roughly us'd, he's full of choler,
As blust'ring Bentley to a brother scholar,
Yet by degrees, inure him to submit,
He 's tame, and in his mouth receives the bit.
But chiefly against trifling contests guard,
'Tis here submission seems to man most hard:
Nor imitate that resolute old fool*,
Who undertook to kick against his mule.
But those who will not by instruction learn,
How fatal trifles prove, let story warn.
Panthus and Euclio, link'd by friendship's tie,
Liv'd each for each, as each for each would die;
Like objects pleas'd them, and like objects pain'd;
'Twas but one soul that in two bodies reign'd.
One night, as usual 'twas their nights to pass,
They ply'd the cheerful, but still temp'rate glass,
When, lo! a doubt is rais'd about a word;
A doubt that must be ended by the sword.
One falls a victim; mark, O man, thy shame,
Because their glossaries were not the same.

* Ctesipho.

Could Bailey's * self more tenderness have shown
For his two tomes of words, though half his own?

For what remains of failings without end,
Morals must some, and some the laws must mend.
While others in such monstrous forms appear,
As tongue-tied sourness, sly suspicion's leer,
Free-fisted rudeness, dropsical pretence,
Proteus' caprice, and elbowing insolence;
No caution to avoid them they demand,
Like wretches branded by the hangman's hand.

If faith to some philosophers be given,
Man, that great lord of earth, that heir of Heaven,
Savage at first inhabited the wood,
And scrambled with his fellow-brutes for food;
No social home he knew, no friendship's tie,
Selfish in good, in ill without ally;
'Till some in length of time, of stronger nerve,
And greater cunning, forc'd the rest to serve
One common purpose, and, in nature's spite,
Brought the whole jarring species to unite.
But might we not with equal reason say,
That every single particle of clay
Which forms our body, was at first design'd
To lie for ever from the rest disjoin'd?

* Nathan Bailey, the compiler of a Latin and English Dictionary, and editor of several classics for the use of schools. He died June 27, 1742.

Can this be said, and can it be allow'd
'Twas with its powers for no one end endow'd?
If so; we own that man, at first, by art
Was sooth'd to act in social life a part.
'Tis true, in some the seeds of discord seem
To contradict this all-uniting scheme;
But *that* no more hurts nature's general course,
Than matter found with a repelling force.

Turn we awhile on lonely man our eyes,
And see what frantic scenes of folly rise;
In some dark monastery's gloomy cells,
Where formal self-presuming Virtue dwells;
Bedoz'd with dreams of grace-distilling caves,
Of holy puddles, and consuming graves,
Of animated plaster, wood, and stone,
And mighty cures by sainted sinners done.
Permit me, Muse, still farther to explore,
And turn the leaves of superstition o'er;
Where wonders upon wonders ever grow,
Chaos of zeal and blindness, mirth and woe;
Visions of devils into monkeys turn'd,
That hot from hell roar at a finger burn'd *;
Bottles of precious tears that saints have wept †,
And breath a thousand years in phials kept ‡;

* St. Dominick, vide Jansenius (Nic.)
† Of our Saviour and others, vide Ferrand.
‡ Of Joseph, vide Molinæum.

Sun-beams sent down to prop one friar's staff *,
And hell broke loose to make another laugh †;
Obedient fleas ‡, and superstitious mice §;
Confessing wolves ‖, and sanctifying lice **;
Letters and houses by an angel carried ††;
And, wondrous! virgin nuns to Jesus married ‡‡;
One monk, not knowing how to spend his time,
Sits down to find out some unheard-of crime;
Increases the large catalogue of sins,
And where the sober finish, there begins.
Of death eternal his decree is past,
For the first crime, as fix'd as for the last.
While that, as idle, and as pious too,
Compounds with false religion for the true;
He, courtly usher to the blest abodes,
Weighs all the niceties of forms and modes;
And makes the rugged path so smooth and even,
None but an ill-bred man can miss of Heaven.
One Heaven-inspir'd invents a frock, or hood:
The taylor now cuts out, and men grow good.

* St. Cathro's, vide Golganum.

† St. Anthony.

‡ Vide Life of St. Colman by Colganus.

§ The same life by the same author.

‖ Vide Speculum vitæ sancti Francisci.

** St. Munnu gathered those that dropt from him, and put them in their place again; vide Act. Sanctorum.

†† From St. Firman to St. Columba, vide Colganum. Chapel of Loretto.

‡‡ Maria de la Visitation; vide her life by Lusignan.

Another quits his stockings, breeches, shirt,
Because he fancies virtue dwells with dirt;
While all concur to take away the stress
From weightier points, and lay it on the less.
Anxious each paltry relique to preserve
Of him, whose hungry friends they leave to starve;
Harass'd by watchings, abstinence, and chains;
Strangers to joys, familiar grown with pains;
To all the means of virtue they attend
With strictest care, and only miss the end.

Can Scripture teach us, or can sense persuade,
That man for such employments e'er was made?
Far be that thought! but let us now relate
A character as opposite, as great,
In him, who living gave to Athens fame,
And, by his death, immortaliz'd her shame.
Great scourge of sophists! he from heaven brought down,
And plac'd true wisdom on th' usurper's throne:
Philosopher in all things, but pretence;
He taught what they neglected, common sense.
They o'er the stiff Lyceum form'd to rule;
He, o'er mankind; all Athens was his school.
The sober tradesman, and smart petit-maitre,
Great lords, and wits, in their own eyes still greater,
With him grew wise; unknowing they were taught:
He spoke like them, tho' not like them he thought:
Nor wept, nor laugh'd, at man's perverted state;
But left to women this, to idiots that.

View him with sophists fam'd for fierce contest,
Or crown'd with roses at the jovial feast;
Insulted by a peevish, noisy wife,
Or at the bar foredoom'd to lose his life;
What moving words flow from his artless tongue,
Sublime with ease, with condescension strong!
Yet scorn'd to flatter vice, or virtue blame;
Nor chang'd to please, but pleas'd because the same;
The same by friends caress'd, by foes withstood,
Still unaffected, cheerful, mild, and good.
Behold one pagan, drawn in colours faint,
Outshine ten thousand monks, tho' each a saint!

Here let us fix our foot, hence take our view,
And learn to try false merit by the true.
We see, when reason stagnates in the brain,
The dregs of fancy cloud its purest vein;
But circulation betwixt mind and mind
Extends its course, and renders it refin'd.
When warm with youth we tread the flow'ry way,
All nature charms, and ev'ry scene looks gay;
Each object gratifies each sense in turn,
Whilst now for rattles, now for nymphs we burn;
Enslav'd by friendship's or by love's soft smile,
We ne'er suspect, because we mean no guile.
Till, flush'd with hope from views of past success,
We lay on some main trifle all our stress;
When, lo! the mistress or the friend betrays,
And the whole fancied cheat of life displays.

Stunn'd with an ill that from ourselves arose;
For instinct rul'd, when reason should have chose;
We fly for comfort to some lonely scene,
Victims henceforth of dirt, and drink, and spleen.

But let no obstacles that cross our views,
Pervert our talents from their destin'd use;
For, as upon life's hill we upwards press,
Our views will be obstructed less and less.
Be all false delicacy far away,
Lest it from nature lead us quite astray;
And for th' imagin'd vice of human race,
Destroy our virtue, or our parts debase:
Since God with reason joins to make us own,
That 'tis not good for man to be alone.

37

SOME THOUGHTS

OCCASIONED BY

THE LATE EARTHQUAKES.

A POEM.

FIRST PRINTED IN 1750.

ADVERTISEMENT.

THE Bishop of London's Pastoral Letter produced the following lines; and my best excuse, if any be needful, for publishing them, is, that a Poem may possibly fall into the hands of some who either would not read at all, or not with due attention, that excellent piece. If this should prove to be the case, and they should awake any serious thoughts in the giddy and vicious part of mankind, I shall think my time not ill employed in writing them.

SOME THOUGHTS

OCCASIONED BY

THE LATE EARTHQUAKES.

YES, glorious Being, humbly I adore
Thy dreadful footsteps ! Who but Thou could shake
The firm foundations of this solid globe !
Thou, by whose potent breath old Ocean swells
Into huge mountains, and o'erturns at once
Cities and mounds, and all the works of man :
Even works whose texture seem'd with rocks to vie !
Heaps roll'd on heaps, all moulder at thy touch,
And crumble into atoms. Wing'd by Thee
The viewless air grows like the crystal firm,
And ruins all before it. For when Thou
Hast issued forth thy just and sure decree,
Nothing is strong or weak, but as it serves
Thy will omnipotent. Then, at thy throne,
Let me again my adorations pay ;
And own the hand that wrought this mighty deed.

Let bold and vain philosophers dispute
Of what they dimly see, or dream they see:
Despise the vulgar, and with idle prate
Try to confound the workman with the work.
But who at first the mighty vapour form'd?
Who plac'd it there? and who assign'd its course?
Would he who fram'd this mighty mass of things;
Who clothes it all in beauty; makes it move
With harmony, and every part adjusts
With nicest order—can we think that He
Would leave this wond'rous subterraneous power
To act at random? Would the Hand divine
Thus work by halves; work in a way beneath
The skill of man? Oh, no; the thought's absurd.
As well might planet upon planet rush
Without his guidance. He who knows but this
Knows all that's needful now. Far be it from me
To blame thee, fair Philosophy; for thou
From Heaven descended'st, and to Heaven dost lead.
But there's a time for all things: and when death
And desolation threaten all around,
'Tis better far to know the end than cause.
Then vanish every less important thought,
And let the dire explosion bring to mind
That day when the foundations of the earth
Shall quiver to the center; when the trumps
Of angels and archangels shall resound
Through this vast concave, and awake the dead;
When all the trappings of this world shall pass;
And every man in his own shape appear

Before the great and dread tribunal, fix'd
For final judgment; there to give account,
A strict account, for every foul misdeed.

Britain, surrounded by her subject main
(Defence more sure than ramparts, or than rocks),
With a mild climate bless'd, and fertile soil,
Sits as the Queen of Isles; and says her throne
Shall last for ever. From afar she hears
Of nations perishing beneath the sword;
Pining with famine; by the pestilence
Consuming; or with subterraneous fires
Sinking into the bottomless abyss
With sudden ruin. Of this she only hears,
Herself unhurt. But when her time is come
Nought shall avail her: from the distant South
The wide-destroying locusts forth shall come
In hideous legions, and our fields lay waste,
If He commands who made them; nor shall feel
The change of climate. At his powerful nod
The very winds, whose favouring breath conveys
Our ships to every port around the globe,
And brings the riches of the nations home;
That makes our merchants princes, and to us
Assigns the vast dominion of the sea:
Those very winds, at his all-powerful nod,
Shall war against us, and our fleets destroy.
If He but wills, this mild and wholesome air
That now invigorates our comely limbs,
To man shall grow infectious; and our towns

Shall swarm with carcasses, as now our fields:
Or, what of late we but too justly fear'd.
Convincing and alarming proof! that He
Wanteth not stores to execute his wrath
Wherever Vengeance calls: the gaping gulph
Shall overwhelm us if He give the word.

Thou, best enlightener of the human mind,
Religion, guide me to thy sacred page!
There let me pensive muse, and turn my eyes
On Sodom and Gomorrah, on Babylon,
Sidon and Tyre; but last and chief of all,
On thee, Jerusalem! There let me mark
The various warning given the chosen seed,
With more than a paternal tenderness,
Before the final ruin. Let me weigh
In equal scale their crimes against our own,
And judge if we are not what they once were.

Does not Oppression stride with giant step
Throughout this land, and tread upon the necks
Of the defenceless and the innocent?
Do not our orphans and our widows sigh
In vain for justice, and look up to Heaven,
Their only refuge? Have not Infidels
Trampled on all things sacred, and defy'd
The living GOD? Nay, have not priests themselves
Taught us to prove rebellious to that Being
Whom they were sworn to serve? Do we not all

Offer up incense both to Luxury
And Avarice at once? See, in our streets
Unpunish'd flaunts the harlot, with fair speech
And wanton arts to draw our heedless youth
Like oxen to the slaughter? * * *
* * * * * * O land
Of virtue once! how art thou now become
A prey to every vice that bears a name!
And calls not this for vengeance from above?

Yet still supinely in the very time
Of peril, all our follies we pursue,
And all our sins; and with presumptuous thought,
Or fix the dreadful day, or boldly cry,
It is not near: pray Heaven it may not be!
May we avert it by incessant prayer,
And that best sacrifice, an humble heart,
Pure, undefil'd; and at the throne of grace
Made acceptable by our Great High Priest.

Be this each soul's concern; but chiefly, thou,
Imperial City, be the first to lead
The way in humiliation; may thy priests,
Cloth'd in the robe of righteousness, declare
The people's sins, and spare not: may all try,
Princes, and priests, and people, with one voice,
To deprecate Heaven's wrath, that it may spare
The many unrighteous for the righteous few,
And give time for repentance! Gracious Heaven!
To thy once favour'd people grant this boon:

The spirit of wisdom breathe throughout this land,
And lead us to the paths we long have shunn'd.
Teach us obedience to thy holy word,
That word which our forefathers us'd to deem
Their chiefest grace and glory! Can the maid
Forget her ornaments? or the young bride
Her gay attire? Yet we, unnatural race,
Days without number have forgot thy word;
Or, 'tis become but as a pleasant song,
Sung by a melodious voice, to instruments
Well-tun'd and touch'd with skill. For, if we hear,
We do it not. Oh, teach us this, good Heaven,
Oh, teach us Thee to fear, and we are safe!

POETICAL EFFUSION

ON THE

ŒCONOMY OF NATURE.

Printed in the Miscellaneous Tracts, p. 126.

THE Œconomy of Nature, though a subject often treated by learned and ingenious men, seems to me to contain many things new and curious, and to give a more comprehensive and distinct view, as it were in a map, of the several parts of nature, their connexions and dependencies, than is any where else to be found. But, exclusive of this, or any other comparative merit, it certainly conveys an useful lesson, and such an one as the best of us often want to have inculcated.

From a partial consideration of things, we are very apt to criticise what we ought to admire; to look upon as useless what perhaps we should own to be of infinite advantage to us, did we see a little farther; to be peevish where we ought to give thanks, and at the same time to ridicule those, who employ their time and

thoughts in examining what we were, *i. e.* some of us most assuredly were, created and appointed to study. In short, we are too apt to treat the Almighty worse than a rational man would treat a good mechanic; whose works he would either thoroughly examine, or be ashamed to find any fault with them. This is the effect of a partial consideration of Nature; but he who has candour of mind and leisure to look farther, will be inclined to cry out:

How wondrous is this scene! where all is form'd
With number, weight, and measure! all design'd
For some great end! where not alone the plant
Of stately growth, the herb of glorious hue,
Or food-full substance; not the labouring steed,
The herd, and flock that feed us; not the mine
That yields us stores for elegance and use,
The sea that loads our table, and conveys
The wanderer man from clime to clime, with all
Those rolling spheres, that from on high shed down
Their kindly influence; not these alone,
Which strike ev'n eyes incurious; but each moss,
Each shell, each crawling insect holds a rank
Important in the plan of Him, who fram'd
This scale of beings; holds a rank, which lost
Would break the chain, and leave behind a gap
Which nature's self would rue. Almighty Being,
Cause and support of all things, can I view
These objects of my wonder; can I feel
These fine sensations, and not think of Thee?

Thou who dost through th' eternal round of time,
Dost through th' immensity of space exist
Alone, shalt Thou alone excluded be
From this thy universe? Shall feeble man
Think it beneath his proud philosophy
To call for thy assistance, and pretend
To frame a world, who cannot frame a clod?—

Not to know Thee, is not to know ourselves—
Is to know nothing—nothing worth the care
Of man's exalted spirit—all becomes
Without thy ray divine, one dreary gloom;
Where lurk the monsters of fantastic brains,
Order bereft of thought, uncaus'd effects,
Fate freely acting, and unerring Chance.
WHERE meanless matter to a chaos sinks,
Or something lower still, for without Thee
It crumbles into atoms void of force,
Void of resistance—it eludes our thought.
WHERE laws eternal to the varying code
Of self-love dwindle. Interest, passion, whim,
Take place of right and wrong, the golden chain
Of beings melts away, and the mind's eye
Sees nothing but the present. All beyond
Is visionary guess—is dream—is death!

DRAMAS.

1. JOSEPH.
2. MOSES AND ZIPPORAH.
3. MEDEA.

JOSEPH.

DRAMATIS PERSONÆ.

JOSEPH.
POTIPHAR.
AMENTHE, Wife to Potiphar.
METHURA, Servant and Confident to Amenthe.
Angels.
Priests, Musicians, &c.

SCENE, *Heliopolis, in Egypt.*

The Drama begins early in the morning. Potiphar sets out for Sais. In the evening Amenthe tempts Joseph. Towards the morning the hymn begins. Towards the evening Potiphar returns to Heliopolis.

ADVERTISEMENT.

IN order to vindicate myself from the imputation of having capriciously invented circumstances merely for the embellishment of the following Drama, it will be necessary to cite some passages from writers not generally read; for though the Muse is allowed a great latitude for invention, yet no ornaments become her so much as those which she borrows from History, because no other can have equal propriety.

Gentle asp, p. 60.—It may be worth while to cite here a curious piece of natural history, in relation to the asp. Prosper Alpinus, Rer. Ægyp. lib. iv. c. 4, says, that its bite is very small; that it does not cause any inflammation or swelling; and that its poison immediately runs over all the body, and brings on a kind of numbness or lassitude, accompanied with a gentle sleep, so that those who die of it die not without pleasure. Prosper Alpinus seems to say this from his own knowledge, and quotes Nicander to the same purpose.

That lake which parts, &c. p. 60.—Diodorus Siculus, lib. 1, mentioning that passage in the Odyssey, where Homer describes the descent of the souls of the suitors into Hades, lib. 24, says, that by the gates of the sun the poet meant the city Heliopolis; and by the Asphodel meadow, where he supposed the dead to inhabit, he meant a place beyond the Acherusian lake, near Memphis, where there were most beautiful meadows and pools abounding with the lotus and the calamus aromaticus. Homer, adds the Historian, very properly makes this place the seat of departed souls, for most Ægyptians were buried there, their bodies being transported thither over the Acherusian lake.

To-morrow is the Feast of Lights, p. 61.—Herodotus says thus, Euterpe, 62. p. 112, "When the Ægyptians assemble together at Sais to sacrifice in the night, they light up lamps, and place them about the houses. The lamps are supplied with oil and salt; the wick floats upon the surface, and burns all night. This feast is called the Feast of Lamps. They who do not come to the meeting still observe this nightly sacrifice, and set up lamps; so that not only at Sais, but all over Ægypt, lamps are lighted. Why this night is celebrated appears in their sacred writings."

Sirius, rise, &c. p. 74.—So much for the Feast of Lamps in general. As to the meaning and intention of it; Jablouski, one of the most judicious and sagacious writers upon the Ægyptian Antiquities, supposes,

vid. Panth. Ægypt, vol. I. p. 80. that it was celebrated at the rising of Sirius, or the Dog-star, *i. e.* when this star was so far to the West of the Sun that it could be seen before day-break; at which season the Nile rises, and the Ægyptians began their year, and believed the world was first formed. This opinion of Jablouski is very probable, and becomes more so if we consider, that we may fairly suppose, that when this feast was first appointed the Dog-star rose in Ægypt about the summer solstice, *vid.* Petav. Uran. p. 77. *i. e.* when the days are longest. Now, according to Horapollo, the Ægyptians above all men delighted in the Sun. This is so true, that its progress through the Zodiac furnished many, if not most of their festivities and humiliations, as we know from undoubted authority.

Hephæstion says, that the antient Ægyptians, when they observed the Dog-star to rise with a golden colour, expected a proper rising and falling of the Nile, upon which the success of their harvest entirely depended.

For these reasons I availed myself of Jablouski's conjecture at the end of the second act; and thought no time could be pitched upon more proper for Amenthe's purpose than when her husband Potiphar must necessarily be absent at Sais, as he was a Priest of the Sun.

Wheels the planets, &c. p. 75.—As to the Copernican system alluded to in this place, there is great reason to believe that it was the discovery of some nation where

astronomy had been much longer cultivated than in Greece, at the time of Pythagoras. This was the opinion of Mr. Maclaurin. To what people then can this system be attributed with so much probability as the Ægyptians, since it was certainly first made known in Greece by Pythagoras, who resided many years amongst them.

This Drama, appearing to be unfit for the stage, was not filled up with the number of songs necessary to give it a proper length of time in performing.

JOSEPH.

ACT I.

SCENE I.

AMENTHE, METHURA, *and* Attendants.

CHORUS.

LET not man complain of fate,
Though some woes attend his state;
For where Reason darts her ray,
All becomes serene and gay.

AMENTHE.

My soul is not in tune for mirth: repeat
That plaintive air again. It better suits
My present thoughts.

SONG.

Envy, hate, ambition, strife,
Cloud the mournful scene of life;

Love itself, that welcome guest
To the young and thoughtless breast,
Soon does with tyrannic sway
Drive all joy and peace away.
Well may we then complain of fate,
Since woes attend our happiest state.

[*All exeunt but* AMENTHE *and* METHURA.

SCENE II.

AMENTHE, METHURA.

AMENTHE.

——"Drives all joy and peace away!"—
O fatal truth to wretches, who like me
Have drunk the dregs of Love's enchanted cup!
Each hour, each moment, of my life, I feel
The poison working here—For this disease,
This first of all, why has not Nature given
Some healing antidote? Is there no charm
In all thy stores, O Isis?—Is there none
To cure a wounded heart? Alas! I 've tried
All hitherto in vain. For magic charms
Have lost all power with me: each waking thought
Saddens the cheerful day; while every dream
Makes gloomy night more gloomy, and conspires
To rack my heart with Joseph.

METHURA.

Leave such thoughts
For those, on whom Nature has not bestow'd
Her chief endowment, beauty; who but act
The part of wisdom, when they strive to quell
A passion, that can hope for no return.
To th' homely leave such charms as these—do thou
Use such as Nature gave thee', and which she meant
Should be employed.

AMENTHE.

They too have been employ'd.
Thou know'st it, and I blush to think thou dost.
They too have lost all power. He feels them not.
O Joseph, Joseph——

METHURA.

Blame not the sweet youth;
But blame thyself. Full many a moon has wained
Since first this passion seiz'd thee, and no signs
Have yet been given by which to read thy mind.

AMENTHE.

Then nature has no language to express
The feelings of the heart, but that of words;
Nay, these have not been wanting.

METHURA.

Tell me not
Of hints, of glances; in a case like this
More is expected. Boldly then resolve
To clear these doubts, or tear him from thy heart.

AMENTHE.

Yes, I will tear him hence. The gentle asp
Shall do this friendly office; she shall shed
Her pleasing balsam in these veins, and cure,
At one kind stroke, despair, and shame, and guilt.
O the delightful thought! to rest my head
On Death's soft pillow; to compose in sleep,
In one eternal sleep, the woes and pangs
That make life grievous! Or, if priests say true,
What rapture will it be, when wafted o'er
That lake, which parts this busy, bustling world
From the bless'd mansions of the peaceful dead,
To breathe ambrosial air; to tread those fields
Where grow the lotus, asphodel, and reed
Of fragrant scent, and there in pleasing dreams
Wait for my Joseph!

SONG.

Methinks I hear the murmuring sound
Of happy nymphs and swains around;
On flowery banks they sit, or rove
In twilight walks, and feast on love:
While glassy lakes, and falling streams,
Reflect fair Isis' silver beams;
And the sweet songster of the night*
Love's listening ear sooths with delight.
If such the joys Elysium yields,
O waft me, Death, to those blest fields!

* Variation.

And the melodious bird of night
Adds sweetness to each sweet delight.

METHURA.

These are the dreams of dotage, and despair;
Unfit for thy condition. Beauty, youth,
And health, are worth enjoying. Wouldst thou then
Fly from this living object of thy love,
This blooming youth, with hopes to meet again
Thou know'st not what, nor where, nor when? Come quit
These vain and idle fancies. Be advis'd——
A sudden thought comes o'er me.

AMENTHE.

Speak it out.

METHURA.

To-morrow is the Feast of Lights. This night
Thy husband goes to Sais.

AMENTHE.

True, he does;
But what of that?

METHURA.

All then will be secure
From him—and for the rest——

AMENTHE.

What dost thou mean

METHURA.

I mean to make thee happy.

AMENTHE.

Thy dark words
Do make me tremble——Hark! methinks I hear
The tread of feet this way.

METHURA.

Quit we for a while
These thoughts, till thy exhausted spirits get
Fresh vigour. [*Exeunt.*

SCENE III.

POTIPHAR, JOSEPH, *and* Attendants.

POTIPHAR.

Is all prepar'd
For my intended journey?

JOSEPH.

All, my Lord,
As thou didst give command.

POTIPHAR.

With careful eye
Watch well the family till my return.
I know 'tis needless to enjoin thee this,
Or any other duty; but a day
Of joy and feasting asks peculiar care,
Lest they disturb thy mistress. She of late,
It gives me pain to see it, but of late
She seems to loath the cheerful scenes of life.
Yet this she cannot wholly shun. The hymn
Demands her presence. See it be performed
To best advantage. It may sooth her grief.

SONG.

Sounds harmonious can impart
Comfort to the bleeding heart;
By their magic power assuage
Human fury, brutal rage.

CHORUS.

Without thy aid,
Celestial maid!
Whose tuneful lyre
Directs the quire,
A chaos still had been
This fair and glorious scene.

O may it prove that boasted charm, and ease
Her sickly mind!

JOSEPH.

Is there aught else remains?

POTIPHAR.

Thou know'st what custom and the law prescribe;
Let these be thy directors. On thy faith,
Thy diligence, thy prudence, I rely
In every case.

JOSEPH.

Thy goodness claims them all.
And merits more than my best powers can pay.
Nought shall escape my care. No bounds I set
To duty, but those only, which the faith
Taught in my earliest days——

POTIPHAR.

I understand—
Thou art excus'd, soon as the rites begin.

SCENE IV.

Enter AMENTHE, METHURA, *and* Attendants.

POTIPHAR.

Amenthe, thou didst now employ our thoughts;
Thy grief has been our subject.

AMENTHE.

It does gain
Fresh fuel when I see it wound thy heart;
But all, I hope, will soon go well. Perhaps
'Tis but a sluggish flowing of the blood,
From some malignant planet; for 'tis said
Such causes oft produce these strange effects.

POTIPHAR.

I hope and wish it soon may pass. Farewell!
To-morrow, with the setting sun, expect
To see thy Potiphar again. Meanwhile,
Joseph has orders how to act; but still
With deference to thy will. Once more, farewell!

[*Exit* POTIPHAR.

SCENE V.

JOSEPH.

Before I quit thy presence, is there aught
Amenthe would command?

AMENTHE.

There is a thing—
But 'tis no matter now—Yet stay awhile—
Perhaps this time may suit—or, if not now,
Some other time ere long.—My husband oft
Has mention'd slightly, but ne'er told me all
Thy wondrous story. From thy mouth I wish
To learn the whole; and let it be some hour
This evening, when thy leisure best permits.

JOSEPH.

Whate'er reluctance I may feel to tell
Of my unnatural brethren, what must shock
Thy virtuous bosom; thou shalt be obey'd.
Wishes from our superiors are commands.

AMENTHE.

Nay, talk not thus. I would not have thee come
To me as thy superior. I could wish
Thy mind were free from all restraint; thy words
Would then have more of nature, and impart
A deeper feeling. To the tender mind
Pity is a feast.

SONG.

All other pains our bliss destroy,
The pains of Pity we enjoy;
To her th' indulgent Gods assign
The taste of happiness divine.

CHORUS.

For she was sent us from above,
To do the work of heavenly love;
To wipe Affliction's tear away,
And make e'en Misery look gay.

ACT II.

SCENE I.

MAIDS OF AMENTHE.

FIRST MAID.

Did ye observe our mistress as she pass'd?
She seem'd disorder'd.

SECOND MAID.

We did see and mark.
Has aught offended her?

FIRST MAID.

Nought that we know.
Her conduct seems quite chang'd of late. From mild
And sweetly temper'd, she has frequent starts,
That make attendance heavy. But our lot
And duty bid us bear. And we should learn
From hence, that every station has its cares,
Its woes, however envied.

SONG.

Not the gilded room of state,
Costly robes, or livery'd train,
Can from care secure the great,
Or support the mind in pain.

CHORUS.

The Gods are pleas'd on men to shower
Unequal shares of wealth and power;
But with impartial hand bestow
True happiness on high and low.

Let us retire,
And wait her orders. [*Exeunt.*

SCENE II.

JOSEPH *alone.*

Was I awake, and can it be that one
Bless'd in so kind a husband, plac'd so high

Above my station—one who stands so clear,
So spotless, in the world's discerning eye,
Should fall to this! should cast away all shame,
And tempt her servant with unlawful love!
Now but too well I understand those words
Of dubious import, which from time to time
She dropp'd as 'twere by chance; those looks that seem'd
To glance suspicious meaning. Fatal fall
To her, perhaps to me! for can she bear
Before her face the witness, and the cause,
Though innocent, of this perfidious act?
No. She will watch occasions; she will seize
Each trivial slip, and in the form of guilt
Present it to the eyes of Potiphar
In his kind moments. What must least ensue,
Should she prevail, but banishment from hence,
This only refuge in my time of woe?
And what is that but ruin? Well, let it come,
Since innocence attends, and draws it down,
If it does come. O holy innocence!
Thy hardest fate, to him who feels aright,
Is better than the best reward of guilt.—
But does not duty bid, and self-defence,
That I reveal this secret?—Were there proof
Sufficient, that might be the case. But here
My tale would gain small credit—and perhaps
She may repent. Let me not then destroy
The peace of my kind lord with fruitless zeal.
Let me to Heaven submit the event, and pray
For constancy to bear whate'er befalls. [*Exit.*

SCENE III.

AMENTHE *and* METHURA.

AMENTHE.

Yes! he did eye me with disdain! did flee
As from a poisonous thing!

METHURA.

Yet be appeas'd,
Sweet lady, all at length may be repair'd.
Thy charms, and patience, must subdue the heart
Of this obdurate.

AMENTHE.

Peace! O name him not—
Upon thy duty name him not. The thought
Strikes daggers in my soul!

METHURA.

I own his guilt.
I see just cause for hate; but yet methinks
Something may still be urg'd in his defence;
A heart unpractis'd in the ways of love;
A reverence toward thy station; perhaps dread,
Lest thou should'st mean to try him, and betray.

AMENTHE.

Vain thought! each look, each trembling accent shew'd
Too well my feeling heart; and must have rous'd
Aught but aversion to a sense of love.——

Wretch! thou didst first deceive me, and thou first
Shalt feel my vengeance.---Thy perfidious tongue
Assur'd me of a kind return---thy eyes,
Yes, thou didst vainly boast, thy prying eyes
Could read the very secret of his soul.
O more than idiot to believe thy boast!
To trust my unsullied honour in the hands
Of one, who basely meant to make a prey
Of her deluded mistress! Thy false arts
Increas'd, inflam'd, nay first a being gave
To this detested passion. Thou didst paint,
In every colour fitted to seduce
The firmest mind, his noble spirit, his worth,
His gentleness, his honour. Cursed fiend,
Pluck out this fatal phantom from my soul,
Or dogs shall tear thy limbs.

METHURA.

O woe is me,
Thus to offend whom I did mean to serve!

AMENTHE.

Yes, monster, thou hast serv'd me, and shalt receive
Such wages as thy services require.

METHURA.

Thou know'st I long oppos'd.

AMENTHE.

Long! What hast thou
To plead for not opposing to the last?
Thou hadst no passion! What hast thou to plead?

SONG.

Abhorred traitress, shun my sight,
Ne'er meet these eyes again;
Thou, thou hast poison'd all delight;
Go triumph in my pain.

METHURA.

O! on my knees I do beseech thee strive
To recollect, to be again thyself.
Consider well thy danger. On the brink
Of a dread precipice thou standest.

AMENTHE.

Wretch,
'Tis false---By thee conducted, once indeed
Upon the brink I stood. But thy vile hand
Has shov'd me off, has hurl'd me headlong down
Into this depth of woe. Shame and contempt,
Contempt from a base slave is now my lot.

METHURA.

O were this all!

AMENTHE.

What horrors hast thou more?
Speak out the worst, I am prepar'd.

METHURA.

Reflect
That on his honour now thy life depends;
And from an idiot so precise, so tame,
So void of feeling for thy heavenly charms,

What honour can be hop'd for? I must own
I have been much deceiv'd. O trust him not,
Believe me, but prevent his fatal tale.
Be thou th' accuser.

AMENTHE.

Horrid thought!

METHURA.

Yet he
Or thou must fall.

AMENTHE.

I am already fall'n---
I cannot lower be---the loss of life,
What were it but a boon to be desired?

METHURA.

Ah! but to lose thy fair repute; to leave
A stain upon thy babes; perhaps still worse——

AMENTHE.

I understand thee. Rack not thus my brain;
O drive me not to madness!

SONG.

Ah me! I see them helpless, poor,
Forsaken, beg from door to door,
Naked on the cold ground they lie;
I hear them groan---they faint---they die.

METHURA.

Forgive my forward zeal. Deepest concern
Forces this from me. Can I see unmov'd

Thy danger ?---Ere thy husband does return,
Something must be resolv'd.

AMENTHE.

Yes, something must---
Tell him my heart is broken---tell him all---
Tell him what thou wilt.

METHURA.

There is but one resource,
And that has been rejected.

AMENTHE.

Be it then---
Thou art become my mistress---be it then---
O horrid resolution !

METHURA.

Call it just,
If vengeance be allow'd, if self-defence.---

SCENE IV.

Enters a Messenger.

MESSENGER.

The minstrelsy appointed to attend,
And celebrate this festival, is now
Prepar'd, and waits thy presence.

AMENTHE.

Well---I come.
Unnatural mixture! Woe with sounds of joy!
Guilt with devotion! But I must submit;
And let these minstrels mock me with their mirth.

[AMENTHE *and* METHURA *go out.*

SCENE V.

Scene opens, and discovers AMENTHE, METHURA, Priests, Musicians, Attendants, &c. *about an altar, on which frankincense is burning.*

SONG.

Sirius, rise, with golden ray
Rise. Bring on th' expected day
Such as when this glorious plan,
Stars and planets first began.

SCENE VI.

Enters a Messenger.

MESSENGER.

Lo! he appears. His ruddy hue proclaims
Fertility to Ægypt.

PRIEST.

Tune we now
Our voices to the God who rules the year,
And wheels the planets round his central fire.

CHORUS.

Osiris, by whose vigorous beams
The sacred soil of Ægypt teems;
Whose plastic virtue first gave birth
To every living form on earth;
Disperse with thine ætherial wings
The noxious damps that Typhon brings,
With latent ills of every kind
That cloud with gloom the human mind;
Accept these offerings at thy shrine;
Faint shadows of thy light divine.

ACT III.

SCENE I.

POTIPHAR, METHURA, Attendants.

POTIPHAR.

WHERE is thy mistress? Wherefore comes she not
As she was wont, to welcome my return?
And meet these longing arms?

METHURA.

Her present state
Must plead in her defence.

POTIPHAR.

Has aught befall'n?
Does sickness hinder?

METHURA.

Sickness of the mind,
That worst of all diseases.

POTIPHAR.

It has long
Griev'd me to see her with such downcast eyes
Pine without cause, and therefore without cure.

METHURA.

Were there indeed no cause!

POTIPHAR.

Dost thou then know
From whence this melancholy? Tell it quick,
And she shall be reliev'd, if love has power
To find a cure. Speak out the cause.

METHURA.

Those words
Were but at random spoke. I cannot think
One bless'd with all the goods which she enjoys,
Should pine without strong reason.

POTIPHAR.

Rack me not,
Tell what thou know'st; for thou dost something know.

METHURA.

I might offend perhaps. 'Twere better far
To hear it from herself.

POTIPHAR.

Fear not. Speak out.

METHURA.

I must obey. The man whom thou hast plac'd
Nearest thy bosom.

POTIPHAR.

What of him?

METHURA.

I dread
To tell the shocking tale. That favour'd man---

POTIPHAR.

Who? Joseph?

METHURA.

He himself boldly presum'd
To tempt Amenthe's virtue.

POTIPHAR.

Can it be,
That such a harden'd villain should exist?
So lost to sense of shame! From her own mouth
His guilt must be confirm'd ere I believe---
Amenthe shall have ample justice done. [*Exit.*

METHURA.

Let Justice sleep---Amenthe wants it not.
Grant her, ye Gods, but firmness.---Should those qualms,
Those nauseous qualms of conscience now return,
I am undone for ever. What a curse
To serve such love-sick babies! [*Exit.*

SCENE II.

POTIPHAR, AMENTHE.

POTIPHAR.

My fair, my injur'd spouse, raise up those eyes.
The cause of grief shall be remov'd. I've heard
The story from Methura. With amaze
I heard it, and require thy attestation.

AMENTHE.

Forgive me when I own, my Lord, that long
I've had suspicions. Duty bids me tell
What I could wish for ever might be hid
From all, but chiefly thee. My falt'ring tongue
Scarce does its office, when I own that long
I've had suspicions of this Hebrew slave.
From hence that gloom which hung upon my mind,
And made thee often chide. What should I do?
Accuse him without ample proof, perhaps

Without sufficient reason? Should I bear
Unnotic'd his strange conduct? and give room
For bolder practice? Thoughts like these have oft
Perplex'd my wavering mind. But yester night---
I tremble when I speak it---shew'd too well---

POTIPHAR.

He did not offer violence!

AMENTHE.

In fact
I cannot say he did. But his wild looks
O I shall ne'er forget them---and his words
Alarm'd me so that in my fright I scream'd,
And in Methura enter'd.

POTIPHAR.

Cursed slave,
His life shall pay the offence. Bid him come here.

AMENTHE.

My Lord, I humbly beg in this affair
My presence be excus'd. These feeble nerves
Would ill support his sight.

POTIPHAR.

Thou art excus'd,
It is but just.

[*Exit* AMENTHE.

SCENE III.

O it does sting me here
To find the very man in whom my soul
Had plac'd its confidence, whom like a son
I lov'd and cherish'd, so perfidious prove.

SONG.

Ah! wherefore do the Gods bestow
On minds so foul, so fair a show?
Ah! wherefore do they not impart
Some note to read the lurking heart?

False villain, for thy sake I shall suspect
Henceforth each form of goodness. Thou hast kill'd
The seeds of faith and kindness in my soul.

SCENE IV.

JOSEPH *enters.*

Why hast thou not appear'd before?

JOSEPH.

My Lord,
I did not know of thy return.

POTIPHAR.

Perhaps
Thou didst not wish it.

JOSEPH.

Can I have a thought
That suits so ill my duty?

POTIPHAR.

Once indeed
I did not think thou couldst.

JOSEPH.

Thy dubious words
Startle and confound me.

POTIPHAR.

It should seem from thence
Thou wert not quite abandon'd. Yet thy deeds
Too fully prove it. Know then I have seen,
Amenthe. She has told me all.

JOSEPH.

My Lord!---

POTIPHAR.

Yes, villain, she has told me that thou daredst
Solicit her with love. Ungrateful slave,
I rais'd thee from the dust. I gave thee rank
Above thy fellows, trusted to thy faith
My house, my fortunes all. What a return
For these kind favours! Could no robbery

Content thy towering spirit but this worst---
This basest---this most cruel?——thou hadst power
To plunder me at will, to feast on spoils
Gain'd by my weakness, and amidst a gang
Of men like thee laugh at my easy faith.
This thou hadst power to do. But this it seems
Was not enough.---What punishment must then
Be due to such a wretch?

JOSEPH.

Could I indeed
Have dealt so basely, none the laws ordain
Had been sufficient.

POTIPHAR.

Darest thou then deny
A fact attested by Amenthe's self?

JOSEPH.

My Lord, I must deny a charge so false,
Whoe'er attests it.---Gracious God, who seest
The secrets of all hearts, and soon or late
Dost never fail to punish guilt, from thee
I dare to call for vengeance, if my lips
Pronounce a falsehood. Never from this tongue
Did word proceed; never within this heart
Was thought conceiv'd, that tended to defile
The bed of Potiphar.

POTIPHAR.

If oaths avail'd,
Guilt would be sure to escape.

JOSEPH.

Yet innocence
Must use them, or betray itself. 'Twere just——

POTIPHAR.

Nay, plead no more. 'Tis but in vain, thy doom
Is fix'd upon conviction.---Thou shalt learn
In prison, if a wretch like thee can learn,
To grow more wise and humble, since this house
Has made thee thus forget thyself and me. [*Exit.*

SCENE V.

JOSEPH *alone.*

This even exceeds my fears. O dreadful stroke!
Imprison'd, deem'd a villain, of defence
Cut off by honour---wherefore was I dragg'd
Forth from that pit? wherefore not left to die
As my deluded brethren once decreed?
Yes, ye had sav'd me from this worst distress,
Had not your hearts relented.---Can that God
Who drew me thence, who with a pitying eye——
What does this vision mean? Methinks the gates
Of heaven are open'd. Bright angelic forms
Seem to descend, like what my reverend Sire
Beheld at Bethel. From their golden wings
The fragrant breeze shook off around me plays,
And cheers my spirits. Hail, propitious guests,
That deign to visit thus a wretch so low.

SCENE VI.

Voice of ANGELS.

Joseph, we come to raise thee up. Fear not.

SONG.

Providence, by secret ways,
Ways which seem to thwart the end,
Guides man through a wondrous maze,
Brings him where his wishes tend.
Wisdom then should boldly tread
Paths where faith and virtue lead.

True, thou hast lost a powerful friend; but he
And all the nobles of the land shall bow
In reverence towards thee. Thou henceforth shalt serve
Their Lord supreme. Shalt under him preside
O'er Ægypt and its provinces. With tears
Thy brethren shall confess their guilt. Thy Sire
Shall bless those eyes once more, and thou shalt save
The chosen seed of Israel in distress.

CHORUS.

Lo! Israel's God,
Whose powerful nod,
Directs the raging seas,
Makes the blind will
Of man fulfil
His just and wise decrees.

MOSES AND ZIPPORAH.

DRAMATIS PERSONÆ.

MOSES.
JETHRO, Priest of Midian.
ZIPPORAH, } Daughters of Jethro.
MILCAH, }
Sisters of Zipporah.
Attendants.

ARGUMENT.

Now the Priest of Midian had seven daughters; and they came, and drew water, and filled the troughs, to water their father's flock---and the shepherds came and drove them away: but Moses stood up and helped them, and watered their flock.——And when they came to Reuel, their father, he said, How is it that ye came so soon this day?——And they said, An Ægyptian delivered us out of the hand of the shepherds, and also drew water enough for us, and watered the flock.——And he said unto his daughters, And where is he? Why is it that ye have left the man? Call him, that he may eat bread. And Moses was content to dwell with the man: and he gave Moses Zipporah his daughter. Exod. ii. 16—21.

MOSES AND ZIPPORAH.

ACT I.

SCENE I.

ZIPPORAH, MILCAH, *and other* Sisters.

ZIPPORAH.

WHERE is the youth?

MILCAH.

He tends the flock hard by.

ZIPPORAH.

Come then, fair sisters, let us to yon mead
Retire, and under shade enjoy the breeze.
Lo! there the stately lily, richly clad,
Vies with the robes of kings; the fragrant rose
Glows with a virgin blush. There let us cull
The choicest product of the blooming year
To deck our tresses.

SONG.

Short-liv'd glories of the meads,
Let us bind you round our heads,
Fading, warn us of our doom;
Shew the date of youthful bloom.

CHORUS.

But ah! with the returning year
Ye with fresh glow again appear;
While beauty, when it once decays,
Ne'er knows, alas, a second blaze.

MILCAH.

If dreams advise aright, and dreams do oft
Advise aright, the garlands wove this day
Shall form thy bridal crown.

ZIPPORAH.

Fie, simple maid,
Talk not thus wildly. Thou thyself dost know
It cannot be. No suitor yet has gain'd
My reverend sire's consent.

MILCAH.

Yet he, thou know'st,
He too has been forewarn'd; and all accords
With what my dream suggests.

SONG.

I saw the swain; thy cheek did glow
While he thy hand with ardour prest;

Thy downcast eyes, which seem'd to throw
A meaning glance, the flame confest.
Trust me, sweet maid, these ears ere long
With joy shall hear thy bridal song.

ZIPPORAH.

Nay, prithee cease; I do beseech thee, cease
These idle fancies. See, the towering pine
Extends its waving branches, and presents
A refuge from the sun's too powerful ray:
Beneath its hospitable shade let's sit,
And view those streams that from the mountain's brow
In foaming eddies rush; through beds of stone
Work with tumultuous roar, and dash their spray
Upon the brouzing goat, that overhead
Hangs fearless on the nodding shrub; while near
Hovers around the towering bird of prey,
And seems to float on waves of air. Methinks
I long to sit upon that mossy bank,
And for a while forget the world.

MILCAH.

Thy mind
Seems bent on musing more than it was wont:
The sprightly dance was once thy only care,
And every level green, like this, would tempt
Thy nimble foot to tread th' harmonious maze;
Then why not now, while the gay season smiles;

SONG.

Groves, and fields, and meadows, ring
With the songsters of the spring;
Listen to the sprightly quire,
They will mirth with joy inspire:
Age may teach to sit and muse;
Youth shall gayer thoughts infuse.

ZIPPORAH.

There is a time for all things. Nature claims
A share of our regard. When thus she decks
Earth's fairest, sweetest lap, with hand profuse,
She did not mean that man should slight her charms,
As if beneath his notice.

SONG.

Silent Nature oft conveys
Wisdom to the musing mind;
While her beauties she displays,
Every passion grows refin'd.

CHORUS.

She the wings of Fancy prunes,
And the jarring world attunes.

MILCAH.

Hark! whence that tumult! did not a strange noise
Strike on my ear!

ZIPPORAH.

There did! I heard the flock

Bleating, as if disturb'd! they seem to fly
In wild confusion!

MILCAH.

Ha! I hear the voice
Of murderous outcry!---From the mountain's top
Some robbers are descended!---Gracious Heaven,
Where shall we fly!---What refuge can be found
In this lone desert!

ZIPPORAH.

All seems calm again.
'Twas but, perhaps, a false alarm.

MILCAH.

Ah!
The youth is slain---the youth is surely slain!---
I heard his voice distinctly cry for help.---
The savages are masters of the flock,
And will ere long be ours.---Haste---let us fly---
By flight alone we can escape their hands.

SONG.

Trembling limbs, do not betray---
Bear, oh! bear me safe away---
Lo! he comes---his savage air
Confounds my sight, and breathes despair.

Enter MOSES.

MOSES.

Stop, fairest maidens. Fly not thus; but turn,
And view in me no foe.

ZIPPORAH.

We do submit
To thy superior force. We yield the flock,
As thine by right of conquest; but implore
Thy mercy towards our feeble sex.

MOSES.

Your flock
Is safe; and for yourselves, those charms divine
Must prove a sure defence. Kind Heaven bestow'd,
When it bestow'd them, the securest shield
'Gainst all but brutal violence.

SONG.

Ruffians have been known to feel;
Known to drop the murdering steel,
While with wonder and amaze
They rever'd bright beauty's rays.
Beauty's empire was design'd
To subdue the savage mind.

Ye mistake,
I am not what ye think. If 'tis allow'd
To boast, and ease at once your anxious minds,
I am content to boast, that this right hand
Deliver'd you and yours. Ye heard no doubt
The cry, and this alarm'd you. From yon hills
A gang of robbers, by their savage looks
And dress such they appear'd, rush'd on the flock.
The youth who tended fled, and cried aloud

For help. I heard, I flew with utmost speed
To rescue, and success has crown'd the attempt.
Happy in protecting innocence from force;
From lawless savage force; yet happier still,
In guarding beauty join'd with innocence.
Such is my boast.

MILCAH.

Behold the very man
My dream portray'd. [*Aside.*

ZIPPORAH.

O! how shall gratitude
Find words to pay such service?

SONG.

For deeds like this the laurel wreath
Was form'd to grace the conqueror's brow;
Heroes do ne'er the sword unsheath,
When Justice does not urge the blow.

CHORUS.

These are the triumphs of the truly great;
On these immortal praise and glory wait.

MOSES.

It is too much, fair maidens, ye o'erpay
When ye acknowledge thus.

ZIPPORAH.

Nay something more
Is due for such a deed. We have a sire;

He lives not far from hence. Permit us then,
Kind stranger, to conduct thee to his house,
Where thou wilt be receiv'd, as does become
A guest of thy desert, and such a host.

MOSES.

Sweet maid, so fair an offer leaves no choice
To one in my condition. In his race
I read thy noble sire, and cannot doubt,
To find in him, what I most need, a friend,
And kind protector. Gracious God, thou oft
Hast led me by the hand through various scenes
Of danger, from my childhood to this day,
And now perchance has pointed out a place
Of refuge, and wilt turn my woes to joy.

SONG.

Let not innocence repine,
By affliction's waves opprest;
Storms shall at the nod divine
Sink again at once to rest.

CHORUS.

For lo! all power is his
In heav'n, earth, and abyss;
All things do but fulfil
His just and mighty will.

ACT II.

SCENE I.

MOSES, JETHRO, ZIPPORAH, MILCAH, &c.

JETHRO.

KIND stranger, thou art welcome. Of thy worth
Inform'd by these, whom thy heroic hand
Preserv'd in peril, with a feeling heart
I greet thy coming. Thou may'st justly claim
Whate'er a fond and tender parent owes
For such a benefit. Nor this alone
Inclines me, but thy noble presence adds
A fresh and powerful motive to confer
Each token of esteem and deep regard.

MOSES:

The praise of doing what my duty bade
Is all that I can claim, all I can wish.

SONG.

Those garlands which the good bestow
Shine with the brightest glow;
Excite the heart to worthy deeds,
Excel all other meeds.

JETHRO.

Of this some fitter time we 'll talk at large.—
The hour of sacrifice does now draw on,
Which daily we perform. 'Tis in thy choice
Or to partake, or not, as suits thy will.
Know then, that in the righteous steps of Noah
We tread, as by our holy fathers taught
From age to age.

SONG.

Man, by fraud or folly driven,
Dares to quit the laws of Heaven;
We, instructed from his throne,
Those obey, and those alone;
On Jehovah fix our eyes,
And all other Gods despise.

MOSES.

No other law I know
But what thou followest, and with joy shall join
In thy religious rites.

JETHRO.

Enough, Bid then
Th' attendants enter. Zipporah, do thou
In chorus with thy sisters join, and hymn
Thanksgiving for deliverance.

CHORUS.

Thy works, Jehovah, day by day,
Call for our praises without end;

Lo! we the silent call obey,
Look down then, and thy blessing send.

SONG. DUET.

Accept these breathings of the heart,
That warm with sense of mercy flow;
When thy right hand did aid impart,
And sav'd us from the dreadful foe.

CHORUS.

Accept, great Source of Power,
These breathings of the heart;
And in the dangerous hour
For-ever aid impart.

JETHRO.

Stranger, permit me to indulge a wish,
And deem me not too curious, when I ask
Thy country's name, thy story, what kind chance
(For so it proves to me) has led thee here?

MOSES.

Thy wish shall be obey'd, as is most just,
Though it does sting my heart with sharpest pangs,
To own I have no country. That dear name
Slaves have no right to. O! the misery
To live in bondage!

SONG.

Happiness can only grow
Where fair Freedom does reside;

Slaves no taste of joy e'er know,
Victims of caprice and pride.
While such scenes before me rise,
Tears o'erflow these mournful eyes.

Thou, no doubt, hast heard
Of Israel's bondage in a foreign land.
From thence thy servant sprung.

JETHRO.

Fame has not fail'd
To bring us tidings of that holy race,
And partly of their sufferings. But proceed.

MOSES.

Long time they flourish'd under Ægypt's kings,
And wax'd exceeding mighty, like the sands
Upon the shore for number; till at length
State-jealousy prevail'd, and urg'd our foes
To deal with us most cruelly. They plac'd
Oppressive masters over us. They made
Our lives most bitter, and bow'd down our necks
With every servile work. Yet still we grew
Beneath oppression. This increas'd the fears
Of jealous Pharaoh. By one cruel stroke,
Worthy of such a monster, he assayed
To cut off all our future hopes and strength;
The midwives were enjoin'd to slay each male
Of Abraham's race.

JETHRO.

O! most inhuman wretch!

CHORUS.

Detested dragon of the Nile!
Whom blood of infants doth defile;
The earth shall from thy stench be freed;
For know, dire vengeance is decreed.

Thou say'st the midwives were enjoin'd to slay
Each male of Abraham's race, by Pharaoh's law,
What was the issue?

MOSES.

I myself here stand
A proof that God defeated a design
So stain'd with blackest guilt. But 'twere too long
And needless, to relate each circumstance
Attending on my birth, and strange escape
In earliest infancy.

ZIPPORAH.

Nay, tell the whole,
And grudge us not that pleasure. Thou dost know,
If thou know'st aught of woman, that our sex
Feels no delight more strong, than from a tale;
But chiefly one of danger and distress.

SONG.

Weak woman's heart delights to know
The pangs that from compassion flow;
The melting tear becomes her eye,
Her tender breast the heaving sigh.

While thus we feel for others' grief,
We give at once and gain relief.

MOSES.

It ill would suit my duty, fairest maid,
Not to comply with every wish, that springs
Within thy mind. Know then, that full three months
My tender mother hid me from the search
Of Pharaoh's ruffians; but when all resource
Of safety now was lost, she form'd an ark
Of rushes, wrought with curious skill; therein
She plac'd her darling babe, and on the brink
Of Nile she laid me.

SONG.

Weeping, upon the brink I lay,
To ravenous birds and beasts a prey;
Kind Heaven with pity view'd my state,
And snatch'd me from impending fate.

Pharaoh's daughter chanc'd
To pass that way; compassion touch'd her heart,
And to her female train she gave command
To draw me forth. Thence with a mother's care
She watch'd my childhood, nor omitted aught
Needful for body or mind; and from my fate
She nam'd me Moses. Providence thus sav'd
Thy servant from destruction; for what end
Heaven only knows; but something prompts me on,
Something within informs me I was born
To free the race of Israel.

JETHRO.

Strong impulse
Implies strong powers; for He who gives the impulse
Gives it for some great purpose.

MOSES.

Let that be
As Heav'n decrees: but one day, as I spy'd
An Israelite inhumanly oppress
By an Ægyptian villain, in I rush'd;
I slew th' oppressor, and for safety fled.

JETHRO.

Here thou hast found it; and, if such thy will,
Here thou shalt fix thy dwelling.

SONG.

Wherefore has bounteous Heaven bestow'd
On me, its servant, all this good;
Mountains, that numerous flocks afford,
Rich pastures, that with herds are stor'd;
But that it meant by me to bless
Neglected virtue in distress?

I have heard
Of thee, and of thy noble spirit, before.
In visions I have seen thee, have been warn'd
That thou wouldst come, and wert by Providence
Ordain'd to be my son.—Consider then—
Behold these maidens, whom thy valorous arm
Protected from the ruffians. Make a choice

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Amongst them all, and she is thine, with dower
As ample as my means admit.

MOSES.

Kind host,
Thy goodness overwhelms me, and the choice
Might well confound, amongst so many fair:
But this demands the preference; with her first
I held sweet converse; from her lovely eyes
First felt the soft impression.

JETHRO.

Zipporah,
Attend thy father's words:—If in thy heart
Thou feelest no reluctance, in this youth
Behold thy future husband.

ZIPPORAH.

From the time
That reason dawn'd within my mind, I have known
No will but thine.

SONG.

Duty bids me, choice does lead,
To fulfil thy sage decrees;
Youth, that does with wisdom tread,
Treads the path of life with ease.

JETHRO.

Moses, behold thy bride.
To-morrow shall complete thy wish. Mean while,

Thou, Zipporah, prepare whate'er is fit
For such a day; and let thy sisters join
Their friendly hands.

MILCAH.

Thy will shall be obey'd.

CHORUS.

Ere the morning streaks the east,
We'll prepare the bridal feast;
Voice, with harp and dance combin'd,
Shall to joy exalt the mind.

ACT III.

MILCAH, *some of the Sisters, and Attendants.*

MILCAH.

AWAKE, arise, behold the morning star
Grows dim. Aurora, o'er yon Eastern hill,
Spreads out her saffron robe. The bridegroom waits,
Fair Zipporah, and will chide thy tardy steps.
Come forth, and with the glow of beauty bless
His longing eyes, array'd in gay attire,
And shining with full lustre. See prepar'd
The garland form'd of every choicest flower
That decks the gaudy field.

SONG.

Haste, fair virgin, haste away,
Lest the bridegroom chide thy stay;
Lo! the woodbine, and the rose,
Long to kiss thy lovely brows.
Gums, and woods of odorous grain,
Waste for thee their sweets in vain.

CHORUS.

Lo! our hands have rais'd the bower,
Deck'd it for the nuptial hour;
Haste then, virgin, haste away,
Lest the bridegroom chide thy stay.

Enter ZIPPORAH, *with other Sisters.*

ZIPPORAH.

With trembling heart, lo! I obey thy call.

MILCAH.

Does thy heart tremble at a scene of joy?

ZIPPORAH.

It seems indeed a scene of joy to those,
Who view it at a distance; but when near
It bears a solemn face.

MILCAH.

Yet might I judge
By every tender look I saw thee glance
Upon the youth, thy heart was not averse
From this conclusion.

ZIPPORAH.

I must own indeed,
Thou didst not judge amiss. His noble air,
His gentleness, his courage, stole my heart
At our first interview. His moving tale
Help'd to complete the victory. But still
The serious mind will shudder, when it thinks
On such an act as now impends. For life!—
O! what a dreadful thought! One act this day
Will fix my fate for life! and who can tell
What that may prove!

SONG.

Fond Love does in our youthful prime,
A veil o'er every blemish cast,
But the rough hand of searching Time
Ne'er suffers the deceit to last.
When thoughts like these invade the breast,
What harbour can be found for rest?

All thoughtless as thou seem'st,
When the dread hour approaches, thou shalt feel
What I now feel.

MILCAH.

Nay, spoil not thus our mirth
With vain surmises. Fear is now too late,
And should have then prevail'd when thy prompt tongue
Pronounc'd consent. But see! the bridegroom comes
To drive this gloom away.

CHORUS.

Behold he comes with eager pace,
Like the swift roe, to thy embrace!
His raven locks sweet odours shed,
And play in ringlets round his head.

Enter MOSES.

MOSES.

My fair, my spouse,
Lift up those eyes that with the morning star
May vie for brightness. Make thy Moses blest
With heart as well as hand.

ZIPPORAH.

My Lord, this hand
Goes not but with my heart. 'Twere sacrilege,
Or worse, to rob thee of that chiefest right.
Yet, O! excuse a virgin's fears, which time
And thy tried worth will dissipate.

MOSES.

If love,
If gratitude avails, thou art secure.

SONG.

Lend, my fair one, lend no ear,
Yield not to such false alarms;
Yet methinks thy very fear
Adds fresh beauty to thy charms.

Enter JETHRO.

Good morn, my Lord; thy sanction now alone
Is wanting to complete this happy day.

JETHRO.

That sanction thou desirest shall be given.
Is all prepar'd?

MILCAH.

All as thou didst enjoin.

After the Marriage-Ceremony is over, follows

DUET. MOSES *and* ZIPPORAH.

By the bonds of law divine,
By the tender ties of love,
Hands and hearts we freely join;
Kind and faithful we will prove.
Love and duty bind us fast;
May the sacred union last!

CHORUS.

Love and duty bind you fast;
May the sacred union last!

JETHRO.

God of our fathers, whose all-potent will
Did call forth this fair scene of things; whose breath,
Pregnant with life, did from the shapeless dust
Our two first parents raise; whose pure decree
Did bind them in firm union, with command

To increase and multiply—to Thee, great God,
I lift my hands—send down upon this pair
Thy choicest blessings! sanctify their hearts
To pure affection! grant that hate and strife
Ne'er interrupt their peace! and O! if such
Thy gracious will to bless them with increase,
May all their thoughts be bent to form a race
Devoted to thy wise and holy laws!

All.

Be it as thou hast said! May Heaven confirm
Thy pious wishes!

CHORUS.

Let thy will the fiat give,
Gracious God, to this our prayer!
May they long and happy live,
Patterns for each human pair!

MOSES.

Jethro, may Heaven return to thee tenfold
The favour thou hast now conferr'd on me!
Fair Zipporah, possessing thee, I gain
More than I lost; yea, more than I could lose
In quitting Ægypt. Thou hast brought in dower
With beauty, freedom. Thou hast made me know
What 'tis to have a home, a place of rest,
Not subject to a master's will.

ZIPPORAH.

My Lord,
Duty, regard, and interest, all combine

To lead me the right way; and I shall strive
To make that home most pleasing, and relieve
Thy rural labours.

SONG.

Whilst the flocks at noon-tide rest,
I'll prepare the savoury feast;
Choicest berries shall afford
Grateful draughts to cheer thy board:
When thy locks with evening dew,
Dropping lose their glossy hue,
Gums shall shed their sweet perfume *,
And thy locks their grace resume.

JETHRO.

Daughter, thou hast spoke
As well becomes thy sex; but know that he
For higher scenes was born than thou dost dream,
For lo! the Angel of the Lord appears:
I see his form distinct. Lo! he appears
In flames of fire on Horeb's neighbouring top,
And beckons Moses; who, with feet unshod,
Draws near with reverence towards the holy place.

* Myrrha defluentes capillos cum ladani vino et myrtino oleo corroborat. vid. Rai. H. 1842.

Ladanum capillum defluentem cohibet, nigritiamque custodit. Plin. N. H. 397. 31.

The Antients used several species of gums to preserve and beautify the hair; among others Pliny mentions the gum of the poppy, which prevents the hair from falling off, and preserves its colour. Nat. Hist. B, 26. Ch. 8.

SONG.

Hark! hark! a voice I hear;
It sooths and fills the ear.
Its sounds are full of grace
To Israel's mournful race.

Of grace to Israel; but of woe to thee,
Deluded Ægypt. Rivers flow with blood;
The fields are strew'd with carcases; the sea
Swallows up horses, men, and warlike cars.

SONG.

Jehovah nods, and lo!
The waters cease to flow;
Upright in heaps they stand;
They hear his high command.

Upon the neighbouring plain in march appears
A numerous multitude: Before them goes
A pillar of a cloud. My eyes, my ears,
Enough have feasted. Lo! the vision ends
Mysterious, yet with hope and faith full fraught,
And trust in thee, Jehovah.

CHORUS.

All things depend on thy decrees,
Which far surpass the views of man;
Thy piercing eye through ages sees,
And forms one great and wondrous plan.
Hallelujah!

MEDEA.

DRAMATIS PERSONÆ.

CREON, King of Corinth.
JASON.
MEDEA.
PHILETAS, Governor of JASON's Children, by MEDEA.
ÆGLE, Chief Maid to MEDEA.
Colchian Men and Women who accompanied MEDEA into Greece.
Corinthian Men and Women.
Priests, Priestesses, and Attendants.

SCENE, *Corinth, in the Palace.*

MEDEA.

ACT I.

SCENE I.

ÆGLE, *with* Colchian Men *and* Women.

ÆGLE.

WAIT here awhile, my friends—she 's just retir'd
Far from this busy scene, and seeks repose.
O may she find it!—But I fear, alas!
She ne'er will taste that balm of life again.
O had that fatal vessel never plough'd
The briny wave! O that it ne'er had pass'd
Those rocks, which seem by nature's self design'd
To bar all passage!

Fatal, fatal day:
When first she saw that vile deceitful man,
That cruel Jason! Every tie broke through
Of nature, and of duty; every oath
Vow'd at the altar; Creon's daughter now
Possesses all his senses; and this day
Consents to make him happy; while forlorn,
Despis'd, bow'd down with grief, o'erwhelm'd with tears,
Medea sits, rejects all proffer'd aid;
All nourishment; all comfort; silent sits,
And motionless, unless perchance a sigh
Bursts from her troubled breast, and shakes her frame;
Or sudden fury urges her to rave
At human perfidy.

SONG.

* Dismal fate of woman-kind!
Destin'd from their birth to ill;
Slave in body and in mind,
Subject to some tyrant's will.
Young, to artful man a prey;
Old, despis'd and cast away.

But harder still her fate, beauteous and young,

* Variation.

O what a change! How quick are fled
The fleeting hours, since round her bed
We danc'd, and join'd the bridal quire,
While Orpheus touch'd th' enchanted lyre.
Long we presag'd those joys would last;
But like a dream they now are past.

Deserted by a husband. Oh! I dread
How this may end! Her fierce undaunted mind
May tempt her to unsheath the sword, and plunge
Its point in her own heart; or in the heart
Of him she now detests.—Avert, great Jove,
The horrid thought! but e'en her children's lives
Seem scarcely to be safe.

SCENE II.

PHILETAS, *and foregoing.*

PHILETAS.

How fares Medea?

ÆGLE.

As she wont; but whence
This sadness in your looks, that mark despair?
Has aught befallen?

PHILETAS.

Can there want cause for woe
In this sad state? Is not Medea lost?
Cast off? abandon'd in a foreign land
Amidst her foes?

ÆGLE.

Too true, alas! but this
Has long been known. There must be other cause.

PHILETAS.

I almost dread to tell. Alas! she knows
As yet perhaps but half her misery.

SONG.

It is at length decreed
Medea's heart must bleed
At every wounded pore;
In every nerve, in every vein,
She feels already torturing pain;
But still must suffer more.

ÆGLE.

What can be more?

PHILETAS.

Hear then. It is resolv'd
To banish her this day.

ÆGLE.

Ah! whither, whither now
For refuge shall we fly?

CHORUS.

Must we then tempt the boisterous wave
Once more, and find perhaps a grave?
Or on some savage coast,
After long wandering tost,
Be doom'd to suffer all the pains
Of tyranny, of scorn, of chains.

But sure it cannot be
That Jason should desert her thus!

PHILETAS.

Who knows
What lawless passion may produce!

ÆGLE.

Methinks
I hear her groan—She seems to come this way.

PHILETAS.

Let us retire. Thou, Ægle, try to sooth
Her restless mind—Prepare it for the blow
Impending o'er her head.

ÆGLE.

I dread to see her.
I dare not hint at this severe decree;
The lioness, when robb'd of all her young,
Would be less terrible to meet—She comes—
I'll wait, and watch my time, but out of sight.

SCENE III.

MEDEA.

MEDEA.

O woe! woe! woe! Is this then human life?—
Is this the gift, ye Gods, for which we stand
Indebted!—This the scene we dread to quit,

Where a few scatter'd gleams of joy break in
Only to make our woe more deeply felt!.
Ah! wherefore, doating mother, didst thou rear?—
Was there no dagger?—Weak, unhappy sex!
No poison to secure me from those ills
That ever wait on woman!

SONG.

How friendly is the lenient hand of death,
That stops at once our miseries and breath;
But still more friendly, when on our first cries,
It closes up our infant eyes *.

Yet this firm hand can do the deed—It must—
But other work calls for it first—That wretch
Must not be left to triumph.
O Jason! O accursed wretch! O bride,
With all your kindred, sink, sink down to hell---
Let lightning strike you---Let it in one blaze
Seize us together---O it seizes now---

* A weak imitation of Prior's beautiful lines in his Solomon.

" Happy the mortal man who now at last
" Has through this doleful vale of misery past;
" Who to his destin'd stage has carried on
" The tedious load, and laid his burden down;
" Whom the cut brass or wounded marble shows
" Victor o'er life, and all her train of woes.
" He happier yet, who, privileg'd by fate,
" To shorter labour, and a lighter weight;
" Receiv'd but yesterday the gift of breath,
" Order'd to-morrow to return to death."

Already it possesses every vein,
And scorches every nerve---I burn---I die.

SONG.

Fond woman !---Let me stab this heart---
Oh shame to act so weak a part !---
Ungrateful sex !---But not alone——
Yes, 'tis decreed---thou too shalt moan.
He soon shall prove
Th' effects of slighted love.

O Colchos ! O my father !---Why, ah ! why,
Did I forsake, betray you, for a wretch
The most abandon'd !—— [*Goes off.*

SCENE IV.

ÆGLE.

Mighty Jove, look down,
Lend thy assistance ; ease her troubled brain,
And give her comfort.

SCENE V.

JASON *with* Attendants, *and* ÆGLE.

JASON.

Where is this frantic woman ? Call her forth.

ÆGLE.

My Lord, I do beseech you at this time
To spare her weakness.---Wasted out with grief
She needs repose.

JASON.

Why I too need repose,
And so do others.---Therefore am I come.
I must hold converse with her. Had she learn'd
To be more humble, and forbear her threats,
This trouble had been spar'd to her and me.
Go, tell her to prepare.

SONG.

Bid her learn the gentler arts,
Such as sooth and conquer hearts;
Softness is fair woman's dower;
That alone can give her power.
She who lays that charm aside,
Falls a victim to her pride.

I shall soon return,
And hope to meet her in a gentler mood
Than she has shewn of late.

ÆGLE.

My Lord, I go.

[*Goes off.*

SCENE VI.

JASON.

Is all prepar'd to celebrate the feast,
And holy rites of marriage?

Attendant.

All, my Lord,
As you directed. Look propitious down,
Ye Gods, who favour love, and bless this day.

SONG.

The fiend that late has broke our peace,
Shall like the victim's gall be cast aside;
No longer shall her savage pride
Cause mirth and joy throughout the land to cease.

Yes, she shall be remov'd, and Corinth then
Shall ring with harmony.

CHORUS.

Hymen's voice shall strike each shore,
Mix his sounds with murmuring seas;
He shall halcyon days restore,
Every tumult shall appease.
The flute and lyre,
Shall mirth inspire;
Full waves of harmony shall float around,
And Glauca's name enliven every sound.

ACT II.

SCENE I.

MEDEA *alone.*

MEDEA.

* BE calm, tumultuous heart, or lie conceal'd
Beneath the veil of soothing looks and words,
While I for once---But hark! I hear his step.

JASON *enters.*

SCENE II.

MEDEA.

Obedient to thy call, lo! I am come.

JASON.

I hope
With mind prepar'd.

* Variation.

Hypocrisy, assist me, teach my words
Thy gentlest accents, soften every look
For this great trial. Hark! I hear his step.

MEDEA.

Yes, Jason, I am come
Prepar'd to hear my doom.

JASON.

That doom had been
But for thy frenzy milder. The dire threats
By thee so rashly utter'd, have alarm'd
Creon and all his court; and thou henceforth
Must banish'd be from Corinth.

MEDEA.

Dismal doom!
Is there no hope of mercy? Think, O think
What I have borne for thee! O speak one word
In favour of her, whom once you lov'd. Scorn not
The cry of misery.

DUET. MEDEA.

Think, O Jason, think that she,
Who now sues on bended knee,
Pity once to thee did show,
Friendless then like me and low.
Think of this and grateful prove,
Pity her you cannot love.

DUET. JASON.

Hope not thus thy ends to gain,
Rise, Medea—'tis in vain.
Vain are all thy prayers and cries,
Rise, unhappy woman, rise.
Think what drew on thee this fate;
Own 'twas envy, pride, and hate.

MEDEA.

Forgive
That frenzy which excess of passion wrought;
Passion for thee---thou know'st it---Did I not
For thee betray my father?---Did I not——
O horror but to think of!---for thy sake
Destroy my brother *? and for thee did stain
The hands of Pelias' daughters with the blood
Of their own father?---Every crime, which now
Pollutes my soul, most strongly ought to plead
For thy indulgence.

JASON.

I indeed must grant
'Twas passion that seduc'd thy' unruly mind;
Wild passion, which thou now miscallest love.
Love is of gentler nature, and excites
To honour, faith, and virtue. It abhors
Such deeds as thine.

SONG.

When all was gloom, when all was strife,
And man scarce felt the joys of life,
Love came, and breathing heavenly flame,
Gave order to this beauteous frame.
Hence sacred virtue rose. The savage mind
Grew softer, and the passions more refin'd.

MEDEA.

Jason should then have preach'd
This doctrine, when on Colchos' shore he stood

* Vid. Apoll. Rhod. lib. iv. 451.

Friendless, and unassisted. I might then
Perhaps have listen'd. But this doctrine then
For thee was out of season. Thou didst prompt,
Didst urge me on to crimes---O give me back
My innocence ; or since that cannot be,
Let me at least share the rewards of guilt.

JASON.

Thy haughty spirit has ruin'd all my aims ;
Else thou hadst still been happy. For my sake
The king had favour'd thee. But that's now past,
And thou must instantly depart from hence.
Yet, such his goodness, he consents to indulge
A father's prayers, and lets thy children stay.

MEDEA.

Robb'd of my children too! What robb'd of all!
Friends, parents, country, husband !---children too !

SONG.

Jason looks with scorn and hate !---
Creon drives me from his state !---
Pelias, butcher'd by this hand,
Frights me from Thessalia's land !---
Can I bear to cast mine eye,
On those rocks defil'd with gore !---
O my brother---shall I fly ?---
Dare I, to the Colchian shore !---
Dare I brave a father's rage !---
Hope a mother to assuage !---

Obtain at least
One day of respite. Let me stay one day.
Drive me not unprepar'd away to roam
A beggar and an exile---Give me time---
O give me time to take my last farewell
Of my dear children---Think what 'tis to part
For ever from the sight of those we love!

JASON.

I'll use my power with Creon.

MEDEA.

Forget not too
To urge my suit with Glauca. She perhaps
May feel compassion. Tell her, as a mark
Of my regard, I mean to send that robe
Of richest texture, which in happier days,
Alas! with pride I wore; the bridal gift
Of Phœbus, my great sire. Bid her be kind
To those I leave.

JASON.

Thy will shall be obey'd,
All wants shall be supplied ere you depart.
Farewell---be happy---learn to be discreet;
And let me never see thee more. [*Goes out.*

MEDEA.

Yes, once,
Once more, I hope to take my last farewell,
And thank thee for thy kindness. Be discreet---

So he advis'd---Why, I have been discreet---
Have I not tamely born thy insolence?
Go thou thyself and learn discretion, wretch,
Nor trust an injur'd woman.

SONG.

Go, wretch supine, and with thy bride,
Sail down secure on fortune's tide;
But soon fierce blasts shall rise,
And stun thee with surprise.
Great Hecatè shall send from hell,
A storm above thy power to quell. [*Goes out.*

SCENE III.

ÆGLE, PHILETAS, Children, *and* Attendants.

ÆGLE.

O wretched children! my heart bleeds with grief,
When I behold your helpless state, depriv'd
Of her who ought to prove your chief support;
Left to a rival's mercy, sacrific'd
Perhaps to jealousy---at least given up
To cold neglect and a precarious state.

SONG.

Ah me! the tender bloom of infant years,
Like the fair flower that in the spring appears,

If not secur'd against the pinching blast
By the fond parent's care, can never last.

PHILETAS.

O Jason, Jason, can the Gods look down,
And view with patience such enormous guilt!
Forbid it, Jove! O hurl thy thunderbolt
Against his impious head.

ÆGLE.

Philetas, watch;
Guard well the children. Give her time to cool
Ere she behold them. 'Tis a dangerous hour,
So we have ever found it, when the rites
Of Hecatè employ her, and no foot *
Profane is suffer'd to approach the scene.

PHILETAS.

I dread those rites---something works in her mind,
That must have vent.

SONG.

Revenge once rooted in the breast,
But from destruction finds no rest;
Nor friend, nor foe, spares in its rage,
Nor pity shews to sex or age.

CHORUS.

So when the rushing torrent pours,
And overflows its wonted shores;
It wastes the champain far and wide.
And levels all things with its tide.

* Vid. Apoll. Rhod. lib. iv. 235.

SCENE V.

Priest, Priestesses, *a Cauldron. Stage dark.*

PRIEST.

Flash lightning, thunder roll, black clouds descend;
Involve us deep in gloom, and form a scène
Fit for these solemn rites, fit for the soul
Of great Medea.

SCENE VI.

MEDEA *enters.*

MEDEA.

Goddess Hecatè,
Thee I invoke: Thee, by whose aid I lull'd
The dragon's watchful eyes, and tam'd those bulls
From whose throats issued a consuming fire.
Come, Goddess, come.

PRIEST.

See, on thine altar smokes
The grateful sacrifice: each powerful herb
From Thessaly and Pontus, duly pluck'd
When planets were most baneful. See, they float
In dews collected from mephitic pools.

MEDEA.

Come, shed thy influence. Give effect to thoughts
Swelling within my bosom. Teach my soul
To know no tenderness. Quench every spark
Of pity lurking here.

PRIEST.

She comes, she comes!
* Hark, hark, the dogs in choral howls proclaim
Her mighty presence.

SEMICHORUS.

Hark! the solemn sounds I hear!
Lo! the flitting forms appear!
Every sign proclaims her near!

SEMICHORUS.

She comes, she comes, in all her pow'r,
Fierce vengeance on thy foes to show'r,
And aid thee in the dreadful hour.

SONG.

PRIEST.

Dews from Stygian caves distill'd
Lurid herbs with poison fill'd,
Round the brain your steams dispense,
Deaden every softer sense.

* Vid. Apoll. Rhod. lib. iii. ver. 1161—1223.

SONG.

Another Priest.

Suck but in the powerful fume,
Wounds and death shall charms assume;
Pity's self shall not beguile;
Agonies shall make thee smile.

SONG.

MEDEA.

I feel myself possest;
She triumphs in my breast;
All tenderness is gone;
My heart is turn'd to stone.

SEMICHORUS.

O'er this robe your influence shed,
Twine with mischief every thread;
Let all poisons in it meet,
Let it prove her winding-sheet.

CHORUS.

So shall all Greece thee Hecatè adore,
And in Medea own thy mighty power.

ACT III.

SCENE I.

JASON, CREON, Queen, Attendants.

CREON.

HAIL, happy day, hail, happy hour, that makes
The flower of Greece my son. Let trumpets sound;
Let flutes and lyres proclaim the solemn joy;
Be joy on every tongue; in every heart
Where human feelings enter. Thine, I see,
Thine, Jason, is most joyful; on thy face
I read the impression of my Glauca's charms;
It brightens up thy countenance.

JASON.

'Twere strange,
Most strange, were I not happy. Link'd with one,
Who gives at once a refuge, and bestows
The fairest maid that e'er adorn'd her sex.
But wherefore comes she not?

SONG.

Come, and round thy lovely brows,
Place the jessamine and rose;

See the garland ready stands,
Pining fades, and thee demands.

CHORUS.

Haste, fair Glauca, haste away,
Jason pines too with delay.

Attendant.

She but prepares
Her bridal dress. In that rich garment clad
Presented by Medea, she 'll soon come.

CREON.

Meanwhile let music sound. [*Instrumental Music.*

SCENE II.

PHILETAS *and* Children.

PHILETAS.

O how I dread th' event! Medea's mind
Most surely meditates some blow! This calm
Mix'd with a settled gloom, that clouds her brow,
Portends a dreadful storm. She raves no more,
As she was wont.

SONG.

Unmov'd and silent now she stands,
With drooping head, and clasped hands;

Now from her lips, in broken phrase,
Words fall that strike us with amaze;
From her stern eye tears gushing break
By fits, and stain her livid cheek;
Like drops upon the polish'd stone,
They seem unfelt to trickle down.

SCENE III.

MEDEA *and former.*

MEDEA.

The garment, was 't presented?

PHILETAS.

As you bad,
This child presented it.

MEDEA.

That's well. Such gifts
Shall ne'er be wanting for a friend like her.
Yes, it is well. Evil is now my good.
Come hither, let me embrace thee---and thee too.
How did she take it?

PHILETAS.

With a gracious smile.

MEDEA.

I too perhaps may have my time to smile;
All ocean will not quench it---What a blaze!---

SONG.

Methinks I hear her groans---
It seizes on her bones---
Hecatè, look down, and blow
The subtle flame---O spread the woe.

He may be caught himself---who knows? and then---

PHILETAS.

Madam.

MEDEA.

Nay, mind me not---Only some thoughts
Came 'cross, and made me wander---

SCENE IV.

Enter ÆGLE.

Hark, I hear
The sound of trumpets. [*Trumpets heard at a distance.*
'Tis the marriage rite---
Quick, bring the children to my room---She burns---
She falls in ashes---Bring the children up---

ÆGLE.

Madam, the rites are not begun: the bride,
So I was told, by some bad omen warn'd,
Deferr'd awhile the marriage.

SONG.

What wonder if the Gods should send
The worst of omens to attend
A marriage so unchaste!
For when they join their impious hands,
They boldly break those holy bands,
That ever ought to last.

But at length
They 've satisfy'd her doubts, and she prepares——

MEDEA.

Thanks to great Hecatè! May blindness thus
Seize ever on mine enemies!---Dear babes,
How do I love you! Let me taste again
Of your sweet lips, and suck your balmy breath---
O how delightful!---

SONG.

Not Flora's breath, that from the rose
On Zephyr's wings rich odour throws,
Is half so fragrant as your breath,
Sweet babes---and shall the blast of death——
O cruel doom!
How short your bloom!

O smile not---wound not thus your mother's breast!---
Go take them quickly.---O my heart, my heart!

SCENE V.

MEDEA, ÆGLE.

ÆGLE.

Forgive me, madam, if I dare t' express
My gloomy thoughts.

MEDEA.

Speak out; thou hast my leave.

ÆGLE.

O, I beseech thee, be not hurried on
To deeds unnatural.

MEDEA.

What dost thou mean?

ÆGLE.

Consider, they're thy children.

MEDEA.

Dost thou think
I do not love them? Not the blood that flows
In my own body is more dear than theirs.

ÆGLE.

But passion——

MEDEA.

Passion! thou dost see I'm calm.
He has granted all I ask'd---it is enough---
The respite of this day---it is enough---
I'm fully satisfy'd.---Go, and prepare
For our departure.---Bid Philetas wait---
A message to the king requires his aid---
I'll quickly come, [ÆGLE *goes out.*

SCENE VI.

MEDEA *alone.*

Fiend that I am!——Why he,
Jason, decrees, not I.---Yet can it be?
O, 'tis impossible---they must prevail——
Yet can I spare them?---Will not every look,
Each tender accent, tell me with reproach,
That I once lov'd a villain---who now robs---
Engrosses every comfort to himself?——
It must be done---it must.——Fond Nature, yes,
I feel thee---thou abhorrest---Conscience too,
I hear thy cries *.---But crimes must have their course;
They must have fellow crimes; standing alone
They brand the front with folly.---It must be done---
Be steady, hand---strike home---the mother now
Must be forgotten.

* Vid. Apoll. Rhod. lib. iv. ver. 391---420.

SONG.

Yes, I contemn the transient pains;
The steel that passes through their veins,
Through his passes too;
Think of this, and strike the blow.

SCENE VII.

JASON, Attendants. Messenger *enters.*

JASON.

Whence this confusion in thy looks?

Messenger.

My Lord,
I dread to tell the tale.

JASON.

Speak out.

Messenger.

The bride
Not long had put on that accursed robe,
Presented by Medea, ere a flame,
Subtle, and fierce, began to spread around
Her miserable body.---Down she fell,
In anguish inexpressible, and death
Soon clos'd her eyes.---Others beside were caught,
Creon amongst the rest,

SONG.

Round her in vain his arms he threw,
In vain he strove to quench the fire;
Raging from limb to limb it flew;
Ah, wretched daughter! ah, unhappy sire!

JASON.

Alas, his pangs are light to what I feel!
Why did I quit my Glauca?

SONG.

Why was I not in Creon's place?
Why dy'd I not in her embrace?
Why am I left alone,
Eternally to moan,
Of every joy bereft?
Oh! no, my children still are left.

Where's this abandon'd murderess?---O wretch!
Deluded wretch! to trust my happiness
To one so try'd in crimes!---Fool that I was!——
Where is she? Bring her forth.

Attendant.

My Lord, retir'd
To her apartment---every passage barr'd---
The children with her, and we've heard strange cries
From time to time.

JASON.

She cannot be so fell!---
Medea! hark! Medea!

MEDEA.

Who calls there?
I'm busy now---I have no time to talk.

JASON.

O more than tigress! Canst thou then destroy
The babes that suck'd thy breast!---those harmless babes!---
O look with pity on them---they're thy own---
Let nature plead their cause---let innocence——
Ah me! it is too much---Hold, heart---Ye Gods,
Quell, quell this monster. Ha! again I hear
The dismal shriek.---Sweet babes, fall down---embrace--
Cling to her knees, her skirts.---But ah! in vain,
In vain they plead.---This dreadful silence tells
Too well what's done. *St!* not a groan is heard---
I tremble at this silence.

MEDEA.

Thou dost well;
Thou understand'st it right---the work is done.
There, take the dagger---use it like a man.

SONG.

Give me one comfort ere I go,
Strike boldly---end at once thy woe.

Yet no! pollute not with thy stains
The blood, that flow'd from guiltless veins:
Live on, and wretched be,
And, when thou view'st that dagger, think on me.

JASON.

Infernal fury!---but in deeds, not words---
O give her to my vengeance!

MEDEA.

Doating wretch;
Dost thou not yet know who Medea is?
Hast thou forgot her power? Her spirit too
Thou shouldst have better known. Couldst thou believe
That she, who, to preserve a vagabond,
Betray'd her sire, and in a brother's blood
Embrued her hands, would tamely yield thee up
To a detested rival?---Go, embrace
That rival now---thou hast my leave.---Farewell!
The winged car attends, which soon shall bear
Medea to a safer place.

JASON.

The Gods,
Th' avengers of such crimes, shall find thee out.

SONG.

In vain thy dragons spread their sail;
The winged car shall not avail:
Great Jove shall mark thee in thy flight;
Shall never lose thee out of sight.

CHORUS.

Great Jove shall bid the Furies rise,
And flash their torches in thine eyes;
Bid Vengeance, with her Gorgon head,
Pursue, o'ertake, and strike thee dead;
Then drag thee to unheard-of woe,
New tortures in the realms below.

SELECT SONGS

FROM

THE ORATORIO OF PARADISE LOST,

AND OTHER PIECES.

SONGS

FROM

THE ORATORIO OF PARADISE LOST.

SONG.

THOU henceforth art doom'd to toil,
Thou and thy unhappy race.
Doom'd to till the stubborn soil,
Driv'n from this delightful place.
Justice issues this command;
Sin and care go hand in hand.

CHORUS.

God these bounds cannot restrain,
Nor the Heaven of Heavens contain;
He throughout all space exists;
Every life by him subsists.

SONG.

Cease, vain mimic, fancy cease;
Rob, O rob me not of peace:
Wherefore shouldst thou thus torment
Her whose heart is innocent?

SONG.

He who rules in Heaven so high;
He who did this world create;
He perhaps may hear our cry;
May commiserate our state.
On bended knee then let us fall,
And for his aid devoutly call.

SONG.

Roses, shed your rich perfume,
Cover o'er the lovely pair;
Nightingales, your songs resume,
Lull their sleep with softest air.
Happy, happy is their fate,
If they seek no happier state.

CHORUS.

Arise, O Lord! exert thy mighty power,
Strengthen our arms against our foes and Thine!
Let the proud enemy exult no more,
Or let them feel the weight of wrath divine!

SONG.

Awake, my fair, unclose those eyes,
See, the Morning gilds the skies;
See, she peeps from yonder hills;
Zephyrs breathe from fuming rills:
Hark, on high the shrill lark chaunts,
All forsake their nightly haunts.

SONG.

Sweet partaker of my toil,
Partaker of each pleasing care,
We have duly till'd the soil,
Sleep shall now our strength repair.

SONG.

Yes, Adam, yes; the sun, I see,
Is set; but what is time to me?
When my lord, my spouse, is nigh,
Seasons pass unheeded by.

SONG.

He who once in Heaven upright,
Midst the brightest shone so bright,
All deform'd, obscur'd with gloom,
Seems now like his place of doom.
Glory, beauty, fade away,
When we from our duty stray.

SONG.

Bounteous Providence divine,
O how gracious is thy sway!
Duty and delight combine;
Truest bliss is to obey.
Thy commands, well understood,
Lead us to our greatest good.

SONGS

FROM OTHER PIECES.

SONG.

YEA, at his footstool every king
On earth shall bend, and offerings bring
The Lord supreme shall be confest;
In Him all nations shall be blest.
Glory, O Lord my God, is thine,
And boundless reigns thy power divine.

DUET.

Source of Grace, to thee we fly;
From thy mercy-seat look down;
If thou triest with rigid eye,
Who can stand before thy throne?

CHORUS.

Purest men, and angels bright,
Lose all lustre in thy sight:
Thou for ever dost endure,
Thou alone art just and pure.

SONG.

Self-deceiving man in vain
Hides his crimes in deepest night;
He whose eyes no bars restrain,
Sees, and on them darts his light.

CHORUS.

Startled! rous'd at once from sleep,
Sin beholds the dreadful brink;
Looks with horror o'er the steep;
From destruction strives to shrink.

SONG.

As a fair tree, by skilful hand,
Cherish'd and rais'd on fertile land,
Lifts high its lofty head,
And as its branches spread,
Gives shade and rest
To bird and beast:
So shall the rod of Jesse rise,
And mix its branches with the skies.

SONG.

Midst those sad and lonely seats,
Where the solemn bird retreats,
Where the ruler of the day
Never darts his cheerful ray,
Where the feet of man ne'er tread,
Sin should hide its hateful head.
Where all around,
No pleasing sound,
Throughout the tedious year,
Delights the list'ning ear.

SONG.

Glory, empire, pomp, give way;
What is all your empty show?
Truest bliss from Beauty's ray,
Raptures from her kindness flow.
By those social joys alone
Monarchs can their cares remove;
Friendship comes not near the throne
But in company with Love.

SONG.

Short is the date, alas, of human breath!
And various are the ways that lead to death:
How happy he who those of glory treads,
And bravely for the public welfare bleeds!

SONG.

Pale and cold, outstretch'd he lies,
Moulted now in sable shroud;
Clos'd for ever are those eyes,
Which with youthful ardour glow'd.
Death, O! leave me not alone;
Strike, and for this blow atone!

SONG.

How I long to bind her brow
With each costly pearl and gem;
Humbly at her feet to throw
This much-envied diadem!
This a lustre will receive,
From her eyes, it cannot give.

SONG.

Hark, I hear her spirit cry,
Guilty wretch, by thee I die;
From thy hand the fatal dart
Pierc'd my sad, my broken heart!
Hide me, darkness, from his sight,
Wrap me in eternal night.

SONG.

For what, alas, is human power,
Which God vouchsafes not to maintain!
Unless the Lord defend the tower
The watchman waketh but in vain.

CHORUS.

God alone the battle guides,
He o'er victory presides;
Mightiest armies turn and fly
When he looks with wrathful eye.

SONG.

The racking state of hopes and fears
No consolation can appease;
But the worst known, one flood of tears
Clears all, and leaves the mind at ease.
The tempest thus, when at its height,
Unloads the sky, and makes it bright.

SONG.

Love, mighty Love, attempts in vain,
To hold th' ambitious in his chain;
At once with rough unfeeling hand,
They break through every tender band.
Ambition can thy power disarm,
And render feeble every charm.

CHORUS.

When to the Lord we cry in woe,
When humbly at his feet we bow,
The very vale of death
Grows cheerful at his breath,
And streams of comfort never fail to flow.

SONG.

Thus the female mind is made,
Nor long stormy nor serene.
Not unlike the chequer'd shade,
Spots of light with gloom between.
Quick succeeding hopes and fears,
Shine in smiles, or low'r in tears.

SONG.

Art, alas! may sooth the ear,
For a time may lull the pain;
But the wounds that conscience tear
Soon, though clos'd, will burst again.
Heaven decrees, that health of mind
Never shall with guilt be join'd.

SONNETS

ADDRESSED TO HIS FRIENDS

MEMBERS

OF THE

COMMON ROOM AT GENEVA.

SONNETS.

1. TO PRICE *.

GRANDSON to that good man †, who bravely dared
Withstand a Monarch's will, when crowds around
Of noble serving men stoop'd to the ground
Whene'er Corruption's guilty face appear'd;
Thou nobly firm, like him, hast ever rear'd
Thy front sublime; thou, with the giddy found
Steady and wise, hast kept thyself unbound
By glittering chains that others have ensnar'd;
So shall thy virtue due reward obtain,
While they, like Greeks and Trojans heretofore,
Fright holy Virtue from her peaceful seat;
Destroying each his rival, but to gain
A phantom Helen ‡; thou shalt her adore,
Her real, and enjoy in thy retreat.

* Robert Price, Esq. of Foxley in Herefordshire. See his character by Stillingfleet, p. 169.

† Alluding to R. Price, one of the Barons of the Exchequer, who opposed king William's grant of lands to the Duke of Portland, and whose manly speech on this subject is given in the Parliamentary Debates.

‡ A *phantom Helen.* "In the tragedy of Helena, by Euripides, a cloud, resembling Helen, was carried off by Paris, and gave occasion to the Trojan war. The *real* Helen was conveyed by Mercury into Egypt."

2. TO WILLIAMSON *.

When I behold thee, blameless Williamson,
Wreckt like an infant on a savage shore,
While others round on borrow'd pinions soar,
My busy fancy calls thy thread mispun;

Till Faith instructs me the deceit to shun;
While thus she speaks: "Those wings that from the stock
Of Virtue were not lent, howe'er they bore
In this gross air, will melt when near the sun.

The truly-ambitious wait for Nature's time;
Content, by certain, but by slow degrees,
To mount above the reach of vulgar flight;
Nor is that man confin'd to this low clime,
Who but the extremest skirts † of glory sees,
And hears celestial tidings with delight."

* The Rev. Mr. Williamson, friend and travelling companion of Lord Haddington, and his brother Mr. Baillie. Some account of this eccentric but amiable man is given in the Memoirs.

† *Extremest skirts of glory*, &c. *celestial tidings*, &c. "I will send messengers to the isles that have not heard my fame, nor seen my glory," Isa. lxvi. 19.

"And Moses said, I beseech thee shew me thy glory. Thou shalt see my back parts, but my face shall not be seen," Exod. xxxiii. 18—23.

3. TO DAMPIER *.

Thrice worthy guardian of that sacred spring,
That erst with copious stream enrich'd this land,
When Cæsar taught our nobles to command,
Tully to speak, Mæonides to sing;

Till Fashion, stealing with unheeded wing
Into this realm, with touch of foreign hand,
Our girls embolden'd, and our boys unmann'd,
And drew all ages to her magic ring.

Yet shalt not thou be backward in thy sphere
To thwart a sickly world; the sceptre giv'n
Thou know'st to wield, and force the noble youth
To merit titles they were born to bear.
Thou know'st that every sceptre is from Heaven
That guides mankind to virtue and to truth.

* Rev. Dr. Dampier, then one of the upper masters of Eton School, and afterwards Dean of Durham, an intimate and much respected friend of Mr. Stillingfleet.

4. TO WINDHAM *.

O born for active life! when shall I see
Thee, Windham, governing the grave debate,
'Midst the few pillars of the falling state,
With sense acute and elocution free?

How long wilt thou, as once Pelides †, be
Depriv'd of glorious deeds by envious fate,
And forc'd to bear the mock of jealous hate,
As if by choice thou didst the burthen flee?

Go on, like him, to wake thy idle hours
With the sage Muse; give to thy soul her due;
Nor let her handmaid our best hopes beguile;
For she too may benumb her finest powers
With din too coarse; as those, if fame says true,
Grow deaf, who dwell too near the falling Nile.

* William Windham, Esq. the pupil and friend of Mr. Stillingfleet.

† *As once Pelides*, &c.

"Amus'd at ease the god-like man they found,
"Pleas'd with the solemn harp's melodious sound.
"With this he sooths his angry soul, and sings
"Th' immortal deeds of Heroes and of Kings."

POPE's Homer, ix. 249.

"To this I will add another passage, out of the same author, where the lyre of Paris was offered to Alexander; he refused it, saying, it would be of no use to him, that he possessed the lyre of Achilles, to which Achilles sung the praises of heroes. As to the lyre of Paris, added he, it was only fit to be employed in effeminate love ditties."

Plut. de Alex. Fortuna, lib. 1.

5. TO ALDWORTH *.

Dear friend, of soul that answereth to thy birth,
Generous and noble, and of open brow,
Form'd to be cheerful, and make others so;
Come, let 's enjoy the hours design'd for mirth.

Let low ambition tempt the sons of earth
To tread her gloomy paths; thou ne'er shalt bow
To that false mistress; Nature's glass shall show
In thee whate'er in life has real worth.

Since she, kind mother, and true prophetess,
Points out the blessings of a cheerful mind
To all her sons, on easy terms, and plain;
Let us not think that blessing therefore less,
And, like the lep'rous Naaman †, proudly blind,
To cleanse ourselves in her pure stream disdain.

* Richard Aldworth, Esq. who afterwards took the name of Neville, and of whom the reader will find a brief account in the Memoirs.

† *Naaman.* "If the prophet had bid thee do some great thing, wouldst thou not have done it? How much rather then, when he saith to thee, wash and be clean." 2 Kings v. 9.

6. TO BAILLIE *.

Baillie, descended from that generous race,
Who every art of tyranny defied †;
When o'er this trembling land with giant pride,
She triumph'd and abash'd each virtuous face;

Disdain not thou the Muse, who marks the trace
Of rising virtues, though as yet untried;
She knows that Wisdom ever loves t' abide
With sweet austerity, man's truest grace.

Nor shall thy virtues long lie hid, so fit
This age to shew thee, when both high and low,
The worst of Hydras threaten to devour;
For thou shalt others teach not to submit,
Perhaps subdue; but may the world ne'er know
By fatal proofs, what thou canst still do more.

* The Hon. George Hamilton, brother of the Earl of Haddington. He changed his name to Baillie, for an estate which devolved to him from his grandfather George Baillie, Esq.

† He alludes to Thomas second Earl of Haddington, who joined the Covenanters in the beginning of the great rebellion. He was governor of the castle of Dunglas, and blown up by the explosion of the powder-magazine, which was set on fire by the treachery of the store-keeper, who had been his servant. This dreadful catastrophe happened in 1640; and besides the said Earl, the Sheriff of Haddington, with nine other persons of quality, were killed, and many wounded.

7. TO LORD HADDINGTON.

Sweet-natured Lord, at whose birth all the spheres
Tun'd their best harmony, and on whose head
Kind Heav'n its choicest dews in plenty shed;
Teach me what secret in this vale of tears

Supports thy easy mind? Vain hopes and fears,
That o'er the rest a chequer'd shadow spread,
Leave thee unclouded; thou dost gaily tread
As in a path that sun-shine never cheers.

Whence is this learnt? Ah no! the solemn look,
The grave deportment, that with careful scan
Measures each step on level ground and even,
But trips on rough; these may be learnt, we know,
These have *, by that vile beast resembling man;
But thy philosophy is all from Heaven.

* *These have*, &c. "It is related that a King of Egypt once had some monkies taught to dance the pyrrhic dance, which was military, and not thought unworthy the gravest characters. Being richly dressed and masked, they performed their parts with great entertainment to the spectators, in many representations; till a wag one day took it into his head to throw a handful of nuts among them; instantly the pyrrhic dance is at an end; they seize upon the nuts, a battle ensues, masks fly off, tattered robes flutter, and the theatre is in a loud laugh." Luc. Reviv. t. 1. p. 413.

8. TO TATE *.

Lover and judge of harmony, dear Tate,
Now that scarce any notes are heard around,
In a mad world, but those of jarring sound,
From avarice or ambition, pride or hate.

Awake the tuneful string, that us'd till late
To lend its aid, and teach it to compound
Once more sweet music, till each noise be drown'd,
And pleasure smooth the rugged brow of fate.

Or if thou chusest wisely to pursue
The Syren's progress, who but charms the ear,
To gain an easier passage to the heart,
And there create pure harmony and true;
In that celestial concert, wilt thou ne'er
Be deem'd unworthy to perform a part.

* Benjamin Tate, Esq. descended from an antient family in Lincolnshire.

CHARACTER

OF

ROBERT PRICE, ESQ.

MR. Price, the person to whom the first of these Sonnets is addressed, was the most beloved and intimate friend of Mr. Stillingfleet. Of their friendship he always retained the liveliest recollection; and after his death, which happened in the prime of manhood, scarcely ever mentioned his name without tears. In one of his notes to his Observations on Grasses, he acknowledges his obligations to his friend, then recently deceased, for the drawings with which that treatise is illustrated; and adds, "His extraordinary character I shall always revere, and intend to sketch it on some future occasion." He fulfilled this promise, but never gave it to the public. This sketch is preserved among the papers of the family, and was communicated to me by Uvedale Price, Esq. the son and successor of Mr. Stillingfleet's friend. It is too loosely written, and too incorrectly copied, to be printed entire; but in justice to the feelings of Mr. Stillingfleet, and to the memory of so worthy a man, we have given the substance, making as few alterations as possible.

"I take this opportunity of fulfilling my promise to the public, by giving a brief sketch of Mr. Price's character. If it should be deemed unworthy of public notice it must be my own fault, or some of the best judges who knew him intimately are mistaken as well as myself. As the following sketch was drawn up soon after his death, and not long before I published the prints of grasses which he drew for me, my design was to add it at full length, instead of the slight mention then made of him. I should have ventured to speak my sentiments more fully of his talents and character before his decease, had I not known his dislike to every thing which bore the appearance of flattery. But, to my unspeakable sorrow, all restraint is removed by his untimely death.

"I shall therefore further observe, that what I have said of his skill in drawing is far from being a mere compliment, for I am convinced that there are few professors of this art who would be ashamed to have his landscapes attributed to them. I do not say this only on my own judgment, but on the opinion of some of the best judges in the kingdom. Nor, indeed, is his singular proficiency improbable. Besides the advantage of a strong natural inclination, he studied at Rome, under Giovanni Baptisti Busiri, one of the first masters in drawing landscapes with the pen. Mr. Price copied nature with unwearied diligence; he reflected much, reduced every part of drawing to clear and stable principles; and matured his knowledge by the conversation of virtuosi and artists of the first order. I had many opportunities of

observing the depth of his knowledge, and the facility of his hand, having frequently heard him discourse on the subject, and as often been his companion in his journies, for the purpose of taking views. On these occasions his manner was bold, he gave a true representation of every object by a few characteristic outlines, which he traced on the spot, marked any extraordinary effect of light or shade, and left the sketch to be filled up at leisure. He was continually making observations on light and shade, suffered no accidental effect of that fascinating branch of the art to escape him; and, at first sight of a picture or drawing could point out at once what was wanting to produce the best effect. He possessed this talent in so remarkable a degree, that some of the best prints, from Poussin, Claude, and other eminent masters, underwent his correction, after they had passed through the hands of the engraver and director, who was a painter of note; but who was sensible of my friend's superiority.

The same inclination to Music, assisted by the same perseverance, sagacity and judgment, made him no less eminent in that sister art. When at Rome, he studied composition under Andrew Basili, one of the most able masters of Italy. Some of his works, which have been communicated to the public, were much approved by the best judges; but many more, and some of a higher kind, still remain unknown among his papers. His songs were remarkably delicate and expressive, and, as well as his solos and trios, were composed in the

Italian style. His works display a profound knowledge of the rules of art, and his taste and discriminating judgment will appear from his comparison of the Italian and German music, which was published in the Life of Handel *, and drawn up at the request of the ingenious author. Being much pleased with the work of Rameau, and equally disgusted with the perplexities of his style and method, he drew up a concise treatise, to exhibit the system of an author who first deduced the rules of Music from a few simple principles, and he performed his task with no less perspicuity than correctness †. This

* The Life of Handel, published anonymously, but written by the Rev. Mr. Mainwaring, from materials principally communicated by Mr. Smith, p. 165. See Biographical Memoirs of Handel and Smith.

† I have often heard Mr. Smith observe that Mr. Price was an excellent composer. By the favour of his son William Price, Esq. I am enabled to give a list of his compositions, the originals of which are preserved at the family mansion of Foxley. He set to music the oratorio of Guiseppe Reconosciuto, by Metastasio, except two or three songs, which he left unfinished.

" La destra ti Chiede," an ode in the opera of Demofoonte. " Se mai turbo," in the opera of Alessandro nel India, which is mentioned by Burney as a pasticio performed in 1756, (vol. I. p. 767.) " Aspri Rimorsi," a scene in Temistocle, which was written by Apostolo Zeno, set by Porpora, and first acted at the Opera House, in 1743.

Mr. Price also possesses two treatises composed by his father on the theory of music. The first contains a brief but scientific investigation of the principles of harmony; the second an application of those principles to the practice of composition. The work is evidently imperfect; but proves his profound knowledge of the science, and is probably the treatise which Mr. Stillingfleet informs us he drew up to simplify the precepts of Rameau.

accurate knowledge of principle was both a sure guide in his own compositions, and enabled him at one view to judge of the compositions of others, and to rectify the defects, even of the most complicated harmony. Of this I have seen many instances, as well as of his attention to admit no unmeaning notes into the principal or under parts; a fault of which the greatest composers are often guilty. Hence many of his songs, for harmony, modulation, and expression, may be justly compared with those of the best Italian masters. The violin was his favourite instrument; and he excelled in expression, the soul of music, though he wanted that brilliancy of execution which attracts superficial observers.

Were I inclined, this subject would afford me ample matter for many pages; but I know how little stress is laid on such qualifications by many, who, from the Gothic prejudices of our ancestors, consider music as beneath the study of a gentleman; very different in this respect from the polite and manly Greeks, who regarded it as a necessary part of education. Legislators, statesmen, soldiers, and philosophers, agreed in this, however differing in other points. It must be owned, indeed, that not only this, but every other pursuit which tends to mere amusement, becomes contemptible when it breaks in upon the duties of life; at the same time, it cannot be denied, that music is superior to many other amusements which are deemed not unfit employments for gentlemen. But however the case may be in general, which I shall leave to the decision of others, I need

not make an apology for this part of Mr. Price's character; for he never suffered his love of the fine arts to interfere with manly avocations or serious duties.

He excelled in all bodily exercises, and, according to his custom, rendered these amusements a subject of reflection and investigation.

After his marriage he retired into the country *. Here, besides his application to Music and Drawing, he paid particular attention to Agriculture, and rendered his knowledge of art subservient to the improvement of the natural beauties of his demesne, by executing a plan which united novelty, beauty, and profit †. In this,

* To Foxley, the family seat, which is within eight miles of Hereford.

† Among Mr. Stillingfleet's collections is an account of the judicious mode adopted by Mr. Price in tracing the walks in the grounds about Foxley.

"Mr. Price, who was surrounded by hills, had a way of making walks which I never saw practised any where else. He first walked over the whole ground, following, as well as he could, the gentlest and most gradual ascent all the way, and pacing it to the top of the hills: when this was done, he took the whole height, and, by an easy operation in arithmetic, found how much it rose in any number of feet or yards by the way he had marked. Lastly, by the help of a triangle and plummet, he made the path rise regularly, and, in some places, where the height did not bear a great proportion to the length of the walk, insensibly; so that you go to the top of a high and steep hill without any labour, and without knowing that you were not upon plain ground. Besides the ease acquired by this method, there were two other advantages gained. One was, the walk was lengthened, which is considerable, where

as in every thing else, he thought much before he began, weighed and considered every point, and never determined till he had attained a complete idea of the whole. This whole, far from being an inconsiderable object, comprehended several miles, consisting of as great a variety of ground as perhaps is any where to be found in the same compass. Yet all his alterations tended to the real improvement of his estate. He threw into pasture the hilly grounds, which never paid the expence and labour of manuring. He lessened also the number of fences, by throwing open the smaller inclosures, which waste a considerable extent of ground, and injure a crop by their shade, without compensating for the detriment they occasion by an increase of timber.

He rendered essential services to his native country. As a Magistrate, he was the emblem of Justice, acting without favour or affection, without prejudice from party or friendship, without fear of offending or view of obliging, and free from any bias to his own interest. He was patient in hearing both sides, and gentle in his admonitions; yet, when necessary, he could reprove with such force, tempered with such moderation, that the most hardy seldom withstood him or were offended with

space is wanted; another was, that by the winding of the path you were constantly enjoying a new prospect; and both these advantages were gained without affectation, which appears in all winding walks upon a flat, however well managed, unless where the plantation itself winds."

his remonstrances. He declined, as much as possible, sending petty offenders to prison or the house of correction, from the conviction that such places were too often the schools of vice. He seldom failed to accommodate personal quarrels to the satisfaction of all parties; and I, when present on these occasions, have no less admired his sagacity in examining witnesses than the justice of his decisions. Naturally an enemy to oppression, during the late years of scarcity, he shewed himself the friend of the poor, by exerting all the power of the law in their favour; and his behaviour was so determined, cool, and judicious, that he restrained those harpies who were prowling about to enrich themselves by the public calamity, and who were well instructed how far they could legally oppress their fellow-creatures. As a friend to the established government, he supported the militia-act, and, by his zeal, influence, and activity, greatly contributed to its execution in his native county.

Taking up his residence in the country at a time when the roads were scarcely passable, he turned his peculiar attention to a subject so necessary for the intercourse of society and the advantages of trade, and acted with his usual good sense and zeal. He condescended to fill the place of surveyor of the highways to two parishes each year: he fulfilled the duties of that inferior office with the strictest regularity and perseverance, acting with such disinterestedness, that he first finished those roads which were the most distant from

his residence, and voluntarily relinquished a portion of his own land to improve a way from which he derived little benefit.

On the private character of Mr. Price I shall ever reflect with veneration and love; and I think it ought not to be concealed from the public, because it may serve as a model for others to imitate. I lived in a long and intimate familiarity with him, perhaps longer than any other of his friends, or even relations, and therefore am at least as well qualified as any other person to bear a testimony to his great and uncommon worth, however incapable I may be to do it justice.

As a son, nothing could surpass his attention in the performance of all the filial duties; and I could, were it necessary, point out singular instances of his respectful and affectionate attachment to his father long after he had received an independent establishment. His death was accelerated by undertaking a journey to attend his father, who was dangerously ill, at a time when he himself had scarcely recovered from a fit of the gout.

As a husband, he was irreproachable, not only in those great and essential duties which none but bad men violate, but in the minuter circumstances of social intercourse, which so largely contribute to the happiness or misery of the marriage state. Nor can I omit observing that he was blessed with a partner who was fully sensible of his worth, was qualified to partake in the cul-

tivation of his favourite arts, both of which she practised with much skill, and deserved all his tenderness, on account of her excellent qualities both of head and heart *.

As a father, he was fond and indulgent, without relaxing his paternal authority; and so careful to suppress those partialities which perhaps no parent can help feeling, that, although his family was numerous, I never discerned the least difference in his behaviour to any of them, unless it was necessary for correction.

As a companion, he was always cheerful, perfectly well bred, easy and simple in his manners, without affectation or ostentation. He was rather reserved, except on the particular subjects which he had studied; but always ready to listen when any information could be acquired. His elocution was but indifferent; he was indeed more solicitous about things than words, which is not the way to shine in conversation. Hence some of his most intimate acquaintance did not duly appreciate his talents; and I have known superficial observers surprised at his readiness in clearing up a perplexed point, which had puzzled those of apparently brighter parts. The truth is, he thought much, and studied for instruction, not ostentation; but so far was he from affected wisdom or gravity, that, as no man had a finer

* Sarah daughter of John Lord Viscount Barrington. This amiable and accomplished woman died a short time before her husband, March 17, 1759.

taste and relish for wit and pleasantry, so no one was more desirous of promoting lively conversation, though he himself rarely took a principal part in it. Whatever was satirical and ill natured he always seemed to detest, and, as I have frequently observed, presently forgot any malicious story.

No man was more attached to his friends, more ready to serve them, more solicitous to entertain them when under his roof, yet without those officious formalities which are apt to turn civility into a nuisance. Of each of these particulars I was not only a witness, but an instance; having passed several years in his house, or so near, that I was every day an inmate, and was always considered as one of the family; he likewise, without my solicitation, warmly recommended me to a noble Lord his relation *, who, with his usual kindness, complied with the request. Such, in a word, was the excellence of his heart, and the conciliation of his deportment, that, when he offered himself as a candidate to represent the county of Hereford, even the spirit of party respected his character; such veneration and love had he gained, without aiming at popularity.

It is scarcely necessary to enlarge on his behaviour as the master of a family. For the same mixture of gentleness and firmness which no man better understood,

* Mr. Stillingfleet alludes to the post of Master of the Barracks at Kensington, the gift of Lord Barrington, brother-in-law of Mr. Price, when Secretary at War.

and which influenced him on all other occasions, could not fail of rendering him kind to his servants and dependants, yet still so as to maintain his authority. In his house elegance and plenty were constantly seen without ostentation or profusion; indeed there was nothing he more detested than joining pomp and meanness, and making a pitiful niggardliness subservient to the purposes of luxury. That love of consistency and uniformity, which were conspicuous in all his actions, guided him also in this point, and concurred with every other particular to render his house highly agreeable to all his visitors. He was constantly surrounded by his family and friends; for he pursued his studies in a room open to all, not finding the smallest interruption from the conversation of those who were present, or from the noise of children, who were allowed to divert themselves without undue restraint. He seemed to have the same perfect command over his affection as over every faculty of his mind; and, in a course of twenty-five years' acquaintance, during which I had the happiness to live intimately with him, I never heard or saw him say or do any thing of which he had reason to be ashamed. This was the more praise-worthy as it was easy to observe that he was quick in his feelings when he saw no reason to suppress them *.

* His friend Mr. Smith, who knew him scarcely less intimately than Mr. Stillingfleet, informed me that he was by nature choleric, and extremely irritable; but completely subdued this defect in his temper. He not unaptly compared this part of his character to that of the great Lord Somers, of whom Swift observed, "No man is

He had a serenity in his countenance, joined to a manly dignity, which never failed to bespeak the good-will of all who approached him; yet to this serenity which seemed deeply rooted in his mind, he united an unconquerable courage and resolution.

He was so perfect a pattern of disinterestedness that I am persuaded any one might have left to him the decision of a cause in which he was personally concerned. He guided himself in every instance by the rare though simple axioms of common sense; and hence he was uniformly mild, just, regular, steady, benevolent, generous, free from caprice and prejudice, and amiable in every situation.

I cannot finish this character without crowning the whole by observing that he firmly believed the great and essential articles of the Christian Religion, and from that persuasion drew a perfect resignation to the Divine will. This resignation appeared on occasions which called for the full exertion of all his powers, and in which he acquitted himself to the admiration of his friends. His example ought to be a lesson to us to teach us to reflect, as he would have done, on a similar occasion. However extraordinary it may seem that so

more apt to take fire on the least appearance of provocation, which temper he strives to subdue, with the utmost violence upon himself; so that his breast has been seen to heave, and his eyes to sparkle with rage, in those very moments when his words, and the cadence of his voice, were in the humblest and softest manner."

virtuous and excellent a man, with a remarkably strong constitution never injured by intemperance, should be snatched away in the prime of life, while others are suffered to draw on a worthless existence in riot and debauchery; yet this phænomenon has its solution in the great plan of this world, and therefore ought to be regarded with proper submission to Divine Providence. His last illness was a signal proof of his resignation; for, by the account of an eye-witness, he bore his pain with a calmness and patience almost incredible. The physicians say they never saw his equal.

This is a very imperfect sketch of the most perfect character I ever knew. It has nothing to recommend it but the truth of the resemblance, which I doubt not will be acknowledged by all who knew him. I publish it because I am determined to erect a monument to the memory of one whom I sincerely loved, and because I think it concerns mankind to see so spotless a picture, not taken from imagination, but from real life; not as a portrait drawn for amusement, but for an incitement to virtue.

WORKS

ON

NATURAL HISTORY.

PREFACE

TO THE

MISCELLANEOUS TRACTS.

Remarks on the Utility of Natural History when applied to Husbandry.—Advantages derived from the Labours of Linnæus.—Defence of the Sexual System.

THE following pieces were selected from many others published by several ingenious members of that great, and hitherto unrivalled school of Natural History, the University of Upsal in Sweden, under the presidence of Linnæus *. They were selected, not as the only, or

* Linnæus, Phil. Bot. p. 9, has these words, "vid. dissert. nostra de ficu." Now there is a piece in Amœnitates Academicæ, vol. I. on this subject, in which the matter referred to is contained. This piece goes under the name of Cornelius Hegardt, though Linnæus plainly quotes it as his own. How far that may be the case of all the other pieces in the Amœn. Acad. I cannot pretend to say. But it is most likely from the practice in foreign universities, in relation to theses held for degrees, that they must, in great part, be attributed to him at present.

Mr. Stillingfleet afterwards learnt from Dr. Solander, that the materials of these pieces were furnished by Linnæus. He adds, that the President employed each of his disciples in studying and investigating the nature of a plant, particularly in relation to soil, site, and aspect, time of flowering and foliation, and to what insects it fur-

even the most valuable, but as answering best the intention of the translator; which was to make known more generally how far all mankind are concerned in the study of Natural History, and thereby to encourage that branch of knowledge, and spread amongst all orders of men in this nation the improvements made by the excellent Linnæus.

His name, it must be confessed, has been for some time past in the mouths of people, but his works, I imagine, are little known, except to a few virtuosi who have a more than ordinary curiosity, and ardour to look into the minute parts of nature. It cannot indeed be otherwise. For to understand him and to make use of his method, requires more patience and time than are likely to fall to the share of the generality. My design therefore is not to exhort people indiscriminately to study his works; but, as I before observed, to give some idea how useful his pursuits are likely to become in many respects. There will appear, I imagine, such great and extensive views in relation to husbandry, physic, and the general œconomy of human life in these few specimens, that in this age and nation (where every useful art and science meet with generous encouragers) many will be found who will readily promote any rational endeavour to push these discoveries farther, or practise such hints, as may seem to bear a probable appearance of success.

nished food. The result of these observations he threw into the form of Essays, which were communicated to those who were to read dissertations on taking degrees, or on other occasions.

I can scarcely condemn mankind for treating with contempt a virtuoso whom they see employed in poring over a moss or an insect day after day, and spending his life in such seemingly unimportant and barren speculations. The first and most natural reflections which arise on this occasion must be to the disadvantage of such pursuits. Yet were the whole scene of nature laid open to our views; were we admitted to behold the connexions and dependencies of every thing on every other, and to trace the œconomy of nature through the smaller as well as the greater parts of this globe, we might perhaps be obliged to own we were mistaken, and to confess that the supreme Architect had contrived his works in such a manner, that we cannot properly be said to be unconcerned in any one of them; and therefore that studies which seem upon a slight view quite useless, may in the end appear to be of no small importance to mankind. Nay, were we only to look back into the history of arts and sciences, we must be convinced, that we are apt to judge over hastily of things of this nature. We should there find many proofs, that he who gave this instinctive curiosity to some of his creatures, gave it for good and great purposes, and that he rewards with useful discoveries all these minute researches.

It is true this does not always happen to the searcher, or his contemporaries, nor even sometimes to the succeeding generation; but I am apt to think that advantages of one kind or other always accrue to

mankind from such pursuits. Some men are born to observe and record what perhaps by itself is perfectly useless, but yet of great importance to another, who follows and goes a step farther still as useless. To him another succeeds, and thus by degrees, till at last one of a superior genius, laying all that has been done before his time together, brings on a new face of things, improves, adorns, and exalts human society.

All those speculations concerning lines and numbers so ardently pursued, and so exquisitely conducted by the Grecians; what did they aim at? or what did they produce for ages? A little arithmetic, and the first elements of geometry, were all they had need of. This Plato asserts; and though, being himself an able mathematician and remarkably fond of these sciences, he recommends the study of them; yet he makes use of motives that have no relation to the common purposes of life.

When Kepler, from a blind and strong impulse merely to find analogies in nature, discovered that famous analogy between the distances of the several planets from the sun, and the periods in which they compleat their revolutions; of what importance was it to him or to the world?

Again, when Galileo, pushed on by the same irresistible curiosity, found out the law by which bodies fall to the earth, did he, or could he, foresee that any good

would come from his ingenious theorems, or was any immediate use made of them?

Yet had not the Greeks pushed their abstract speculations so far; had not Kepler and Galileo made the above-mentioned discoveries, we never could have seen the greatest work that ever came from the hands of man. Every one will guess that I mean Sir Isaac Newton's Principia.

Some obscure person, whose name is not so much as known, diverting himself idly, as a stander-by would have thought, with trying experiments on a seemingly contemptible piece of stone, found out the Compass, a guide for mariners on the ocean, and such a guide as no science, however subtile and sublime its speculations may be, however wonderful its conclusions, would ever have arrived at. It was bare curiosity that induced Sir Thomas Millington * to examine the minute parts of flowers; but his discoveries have produced the most perfect, and most useful system of Botany that the world has yet seen.

Other instances might be produced to prove, that bare curiosity in one age is the source of the greatest utility in

* Sir Thomas Millington, here alluded to, was Savilian Professor at Oxford. He made some curious discoveries on the minute parts of plants, particularly the flowers, which he communicated to Dr. Grew, who laid them before the Royal Society, in a Lecture on the Anatomy of Flowers, read Nov. 6, 1676. See Pulteney's English Botany, vol. I. p. 337.

another. And what has frequently been said of Chymists, may be applied to every other kind of virtuosi. They hunt perhaps after chimæras and impossibilities, they find something really valuable by the bye. We are but instruments under the Supreme Director, and do not so much as know in many cases what is of most importance for us to search after. But we may be sure of one thing, *viz.* that if we study and follow nature, whatever paths we are led into, we shall at last arrive at something valuable to ourselves and others, but of what kind we must be content to remain ignorant.

I am sensible that after all I have said, or can say, many people will not be persuaded to allow that the study of some parts of natural history can be worthy of a rational creature. They will never vouchsafe to look on mosses and insects in this light. Yet why may not the study of these likewise have its use in future times? It ought to be considered that the number of the latter is immense, that but lately any great attention has been paid to them, that one of them is and has been long the means of cloathing thousands and feeding more, that another affords us honey, another a fine dye, not to mention some few besides, of acknowledged benefit to mankind. Lastly, that they are capable of doing us the greatest mischief, and that, perhaps, a more thorough knowledge of them may instruct us how to secure ourselves against their attacks. Whether this be possible we can never know, till proper encouragement has been given to this branch of Natural History.

Something to the same purpose might be said concerning mosses, but as the intent of one of the following pieces * is principally to take off such objections as I have been considering, I shall, instead of dwelling on this subject, proceed to give a short account of what Linnæus has done towards the improvement of Natural History, that the reader who is unacquainted with his works may form some idea, though very imperfect, of this great man †.

* The treatise on the Use of Curiosity, from which we quote the passage to which he here alludes. "The vulgar think, and those who deem themselves wiser than the vulgar scruple not to say, let him who has nothing to do employ himself in hunting after mosses and flies. By this they would insinuate, that searching after the minute plants and animals is unbecoming, or at least unnecessary for a rational creature. As for mosses, I grant we have no authority on our side, for till the end of the last century they were almost wholly neglected; but within these fifty years their history is nearly completed, by the diligence of Dillenius, who has described near 600. With unwearied assiduity he went through this very difficult and extensive branch of Natural History. But it is asked, To what end? I will not endeavour to answer this question by shewing the particular use of every moss that grows, although I am certain that the Lord of nature has made nothing in vain. But I will venture to assert, that posterity will, some time or other, derive as many advantages from mosses as from other vegetables; and in this I am justified from those which our few experiments on mosses have enabled us to ascertain."

Miscellaneous Tracts, p. 176—189.

† The introduction of specific names was a most important improvement, as it removed the immense labour of remembering the tedious and discordant nomenclature of former botanists.

The Philosophia Botanica was once recommended to a deep

First then, he has invented a new system of Botany, founded on the male and female organs in plants, a system which has thrown a new light over that science. He has defined about 10,000 plants, ranged them into classes, genera and species, given new and regular generical names to many, instead of those barbarous and uncouth ones which prevailed till his time, and added specifical names to all, short, easy, and oftentimes significant, a thing never so much as attempted before. He has brought into Botany a precision, conciseness, and elegance, that were very much wanted. He has observed and given names to parts of plants not noticed by any other Botanist, parts which in some cases are sufficient as well as necessary to distinguish the genus and the species.

The Philosophia Botanica * of this author affords throughout instances of this reformation. Had he written no other book, he would have deserved the highest praise from all lovers of botany. For,

mathematician on account of its systematical arrangement; his opinion was, that it contained one of the finest methods of analytical reasoning he had ever perused.

* In 1750, when he was writing this book, as he tells us in the preface, he was hindered by a terrible fit of the gout, that broke the strength of his mind as well as body. In 1755, he says, Flor. Suec. article 450, that he had been freed from the gout for some years by eating great quantities of fresh strawberries. He adds that this fruit dissolves the tartar of the teeth, that it is remarkably good for people afflicted with the stone or gout, and may be safely eaten in abundance.

besides the amendments just mentioned, it comprehends, in a short compass, something of consequence in every branch of that part of Natural History, and affords hints for various discoveries; hints that must, if pursued, produce many considerable improvements in physic, husbandry, and œconomy.

He has published a Materia Medica so far as relates to plants, in which he has undertaken to determine many species commonly used, but not sufficiently ascertained; adding throughout, in the shortest manner possible, what he has found to be useless or efficacious; and, as he assures us, never highly recommends any without being thoroughly convinced of their virtues, from his own experience, in the hospitals where he presided. Some of these medicines have not yet, I believe, been received into our shops, but they may possibly deserve consideration.

In the last edition of his "Systema Naturæ *," he has mentioned above 1500 species of insects, has classed them all, divided them into genera and species, de-

* "This branch of Natural History," observes an accurate judge, "before the time of Linnæus was nearly without method; for though the œconomy, structure, and metamorphoses of insects had been elucidated by various authors, and numberless species had been accurately figured and described, yet no one had constituted a general arrangement, that enabled the student to investigate them with facility." Maton's edition of Pulteney's Life of Linnæus.

In the subsequent editions the number of species was considerably augmented; the 13th, published by Gmelin, contained 11,000 of the Insectæ, and of the Vermes 6000. Ibid. p. 223---236.

scribed them as to the minutest parts, so far as was necessary to distinguish them; marked the places where they are to be found, the plants upon which they feed, their transformations, cited the authors who have treated on them, and given them classical, generical, and trivial, or specifical names. He has done the same by birds, fishes, and all other known animals; he has also ranged all the fossils, minerals, and stones, to use his language, in a manner partly borrowed, and partly founded on his own observations. But what improvements and additions he has lately made to this part of Natural History, as well as that of plants, we cannot say till the other part of his new edition of the System of Nature comes out, which is expected daily. However, what we see he has done in relation to animals, leaves us no room to doubt but that it will altogether be the most extraordinary book that was ever published in this or almost any other way *.

Besides his writings, of which I have mentioned but a small part, this indefatigable man, born to be Nature's historian, has travelled over Lapland, all Sweden, part of Norway, Denmark, Germany, Holland, England, and France, in search of knowledge. That part of his travels, which is published in Latin, has many curious

* Mr. Stillingfleet here refers to the tenth edition of this remarkable work, published in 1758; but before his death he had the satisfaction to see it completed in the twelfth edition, published at Stockholm, in 3 volumes, in 1766, 7, and 8.

See Maton's edition of Pulteney's Life of Linnæus, p. 171.

and useful observations relating to the purposes of common life. Of those which are written in his own tongue I cannot give any other account, except that by some quotations from them in the writings of his disciples it appears, they well deserve to be communicated to the world in a language more generally understood.

Besides these labours of his own, the world will be one day obliged to him for what others have done. Incited by his example and persuasion, C. Ternstrom went into Asia; P. Kalmius to Pensilvania and Canada; L. Montin into one part of Lapland; D. Solander into another; F. Hasselquist into Ægypt and Palestine; O. Toren to Malabar and Surat; P. Osbech to China and Java; P. Loefling to Spain and America; P. J. Berg to Gothland; M. Koehler to Italy and Apulia; and D. Rolander to Surinam and St. Eustacia; all these with a view to the promotion of Natural History. When we consider him in this light of a master of such disciples as these, and many others, some of whose works are contained in this publication, he must appear like Homer at the head of the poets, Socrates at the head of Greek moralists, and our Newton at the head of the mathematical philosophers. Among all these extraordinary qualifications there appeared throughout his writings spirit, candour, a due regard for others, and proper modesty and diffidence of himself.

I will give a short specimen of his way of thinking in relation to the degree of human knowledge hitherto

attained by man on the subject of Natural History. A subject on which it was very natural for a less extensive genius to be vain, as he has had so great a share himself in the advancement of it. The passage is taken from the introduction to the new edition of his system of nature, and is to this effect. "How small a part of the great works of Nature is laid open to our eyes, and how many things are going on in secret of which we know nothing! How many things are there with which this age was first acquainted! How many things, of which we are ignorant, will come to light when all memory of us shall be no more! For Nature does not at once reveal all her secrets. We are apt to look on ourselves as already admitted into the sanctuary of her temple, we are still only in the porch. I have entered, adds he, into the thick and shady woods of nature, which are every where beset with thorns and briars. I have endeavoured, as much as possible, to keep clear of them; but experience has taught me that there is no man so circumspect as never to forget himself, and therefore I have borne with patience the sneers of the malevolent, and the buffooneries of those whose vivacity is exerted only to molest and give offence to others. I have, in spite of these insults, kept on steadily in my old path, and have finished the course I was destined for."

The latter part of this passage shews that he has not been without his enemies, and that he has suffered in

the same way as the most curious enquirers into Nature in all ages. The warmth of his expressions, which is still stronger in the original, plainly proves that they have not used fair arguments against him; but like interested rivals, or men of a superficial understanding, have endeavoured to subject him and his labours to ridicule. But whatever has been his fate in his own country, as far as I know, his name is almost universally mentioned with respect in all other parts of Europe. It is true, objections have been made to his innovations in other places besides Sweden, which must unavoidably happen on many accounts; but particularly because those natural historians who had been brought up and inured to other systems, who had learned things by other names, and could not easily attain the new ones, must have strong prejudices on this occasion. This objection being personal, I shall not consider it any further; but readily allow that great indulgence is due to such people, and that their fate is to be pitied for coming into the world too soon to be enlightened farther on subjects, which perhaps had employed the greater part of their life. But there are prejudices of another sort which I cannot omit to consider more fully on this occasion.

It must, however, be premised, that the use and intent of a classical system in any part of Natural History, is not to range things according to their natural connections in regard to their outward aspects, or essential qualities, or their medicinal or œconomical properties;

but in such a manner that from the due examination of a plant, mineral or animal, a naturalist may certainly give its true name according to some system. He who goes farther than this is not barely a naturalist, but something more, *viz.* a physician, a chymist, a farmer, a gardener; and he who cannot go thus far to a certain degree, does not deserve the name of a naturalist, however skilful he may be in the virtues and properties of bodies animate and inanimate.

The use then and intent of a classical system is nothing more than that of a dictionary, where no one complains that words totally unconnected in sense are put near one another. The question therefore as to the sexual system, in plants, is not whether they be ranged naturally, but whether in the best manner possible in order to be known. Nay farther, it matters not whether the sexual system be founded on nature or not, whether there be any propagation by seeds without male and female organs. The whole to be considered is whether those parts which are called, and I believe truly called so, do really exist, and whether they for the most part exist so uniformly, as to furnish marks sufficient to distinguish the classes. Nor does it matter whether it be hard to distinguish those marks, but whether they can with proper care and patience be distinguished, whether we can surely distinguish plants, without observing those nice and minute parts, and whether a system has been found equally sure with the Linnæan, without having regard to those parts. Those

who think so would do well to inform the world of their discovery, and not make objections that affect only the obscurity of nature, when they mean to condemn a system which is obscure merely from its consonancy to nature. If Providence has thought fit to write in cyphers, shall he be blamed who endeavours to give a key to its works, because some men cannot distinguish one stroke from another in the cypher?

Those who have not learned to read the characters of nature for want of leisure, patience, or any other cause, ought not to complain that Linnæus cannot make them skilful in a part of knowledge they are not qualified for. If a man unacquainted with the learned languages wants to know the meaning of a Greek word, will he complain of the Lexicon, because he cannot find it? certainly not. Neither ought we to complain of Linnæus in a similar case.

This, I think, is a full answer to all the objections that have or can be made to his system in general. What errors he has committed according to his own principles, in relation to particulars, is quite another question. I am one of those who think him not free from errors. Nor is it wonderful that he should fall into some, but it is truly wonderful that one man should be able to invent and carry so far so nice and extensive a system, especially when we consider, not only what he has done in Botany, but what he has done in all the branches of Natural History besides, and some of them almost en-

tirely neglected before his time. I should therefore wish that those who are fond of this part of knowledge would, instead of making frivolous objections, try by an accurate and diligent examination to rectify his mistakes, and thereby help to perfect a system which deserves the utmost attention, and commendation.

Though I said above, that it matters not whether the sexual system be founded on nature or not; yet it was natural for the inventor to endeavour by all proper means to vindicate it as likely to be so; and this he has done to the satisfaction of the most curious observers; and I will venture to add, that it is natural for others likewise to embrace with zeal a system that puts the works of Providence in so new and beautiful a light by continuing the analogy from the animate to the inanimate creation. It seems as if Providence intended to lead men to this discovery by striking our senses so intensely and so agreeably with those very parts which contain the clue of this system. Yet such is the inattention and inaccuracy of man on certain points, that even a tolerable conjecture concerning the use of those parts was not made till the year 1676*.

* Mr. Stillingfleet alludes to the discoveries of Dr. Grew, which were communicated to the Royal Society in a lecture on the Anatomy of Flowers, read Nov. 6, 1676. Doubts have been entertained whether Dr. Grew was the original discoverer, or received it from Sir Thomas Millington; but this fact is of no great importance to the science itself. We refer the reader to Pulteney's English Botany, vol. I. ch. 25, for an elucidation of the subject.

Having finished all that I think necessary to say concerning Linnæus and his works, I shall now come to what relates immediately to myself only. First then as to the translation, I have endeavoured to avoid making it too literal, and servile; but yet, I hope, without taking any undue liberties, or deviating from the sense of the originals.

The part which is likely to prove least agreeable to the reader, is that which was most troublesome to the translator, I mean the names of things not generally known. Some of these I have been obliged to leave in Latin, not being able to find any English names for them. I will not pretend to have avoided all mistakes on this head; but it is certain I should have committed more, as well as have had much more trouble, had it not been for the assistance of the ingenious Mr. Hudson *, whose skill in all the branches of natural history, and particularly those relating to his profession as an apothecary, cannot fail to recommend him to the favour of the publick. To him I likewise owe the ascertaining of some of the grasses, one of which, *viz.* the small bent grass, which I had in my collection, but knew not where I found it, he discovered to be the *Gramen Minimum Anglobritanum*, mentioned in the "Indiculus Plantarum Dubiarum," at the end of Ray's Synopsis.

I must not omit also on this occasion to acknowledge

* Afterwards well known as the celebrated author of the "Flora Anglica," and other botanical pieces.

my obligation to that excellent botanist Dr. Watson *, for favouring me with a perusal of his collection of grasses, which was of no small service to me.

But to return to the translation: I said that I did not pretend to have avoided all mistakes in relation to the names of things; I will now extend this farther, and own my suspicions that I have made some in relation to other particulars; but I hope they are of such a kind only as may be looked on with indulgence by the learned; especially when they consider the great variety of subjects treated on in these pages, of none of which subjects I profess to be a master, and therefore do not undertake to teach such readers; but on the contrary shall always be ready, and even desirous, to receive instructions from them. I beg they will also consider that I do not aim at letting the unlearned into the mysteries of this part of knowledge, or even teaching them the elements of it. My business is only to excite curiosity, and therefore small errors can be of no consequence. What I have farther to say will be found in notes.

Res summas initio deberi parvo ac debili experientia omnium temporum testatur. Amœnit. Acad. vol. II. p. 266. § 2. †

* Doctor, afterwards Sir William Watson, was an eminent Physician in London, and among the earliest and ablest promoters of the Linnæan System in England. For an account of him see Pulteney's English Botany, vol. II. p. 296.

† The experience of all ages proves that the most important things are often derived from light and trifling causes.

A DISCOURSE

CONCERNING THE

IRRITABILITY OF SOME FLOWERS.

A NEW DISCOVERY.

TRANSLATED FROM THE ITALIAN OF

COUNT GIOVANNI DEL COLVOLA.

MR. STILLINGFLEET'S PREFACE.

THOUGH it may seem unnecessary to prefix any preface to the following small piece; yet I cannot omit this opportunity of making a few observations, most of which, according to the present unartful and vicious mode of writing, I should have thrown into notes, had I not felt that notes are always a disagreeable incumbrance to the reader, and therefore should always be avoided, when it is possible.

I mean not to make an encomium upon the author of this tract; yet this much I cannot help saying, that perhaps a more curious discovery was never made in the botanical way. Elastic motions in plants have been observed by many writers before: such as appear in the closing and opening of leaves and flowers, according to the temperature of the air, or according to the hour of the day; to enumerate all which would be unnecessary on this occasion. Some of these discoveries are of a very antient date, even as early as the first writers on Botany;

others are more modern, and even recent; but all very well deserving the attention of such as think the works of Providence not beneath their notice.

The mechanism of impregnation in plants is a subject never before observed, that I know of, in this way. The parts of fructification, it is true, have been noticed and described, and their uses understood, ever since the time of Sir Thomas Millington; but all hitherto known falls far short of what our Italian has discovered, about the power of motion seemingly necessary to the impregnation of the germ.

Our author observes, as a wonderful phænomenon, that the filaments grow shorter by contraction, and yet do not increase in bulk. This no doubt is wonderful; but not incredible to such as are acquainted with anatomy. We need not indeed go far in search of wonders. We shall meet with them wherever we turn our eyes with attention. We live in the midst of a most exquisite and mysterious machine; and all that the acutest philosophy can do is to end where it begins; in ignorance and admiration. It does by no means from hence follow, that philosophical studies are useless; for in our inquiries we frequently trace out the laws by which Providence acts; and to know his laws is, on many occasions, to know causes so far as it concerns us. For by that knowledge we are enabled to produce effects, as effects depend upon the separation, juxta-position,

composition, resolution, &c. of masses and particles of matter.

It must afford great pleasure to all true lovers of knowledge, to see the spirit of inquiry into nature begin to take place in many parts of Europe; and societies for that purpose erected, in imitation of those useful ones first set on foot in these kingdoms. We may hope henceforward to receive ingenious and important discoveries from those countries, where hitherto little else has been produced but subtleties, disgraceful to human reason, and destructive of human happiness. In Italy particularly we may reasonably expect this will be the case, where the great and first systematical botanist among the moderns lived, I mean Cæsalpinus, to whom most of the late improvements in that way have been owing.

The flower upon which all the experiments exhibited in this tract were made is the *Centaurea calcitrapoides*, Lin. Sp. which is a species nearly approaching to the star-thistle, Hud. Flor. Ang. *Centaurea calcitrapa*, common on sandy roads in this kingdom, and differing from it only in the leaf, according to Linnæus, who calls it the parent of the former; so that perhaps it may be full as proper to make experiments upon, if any one is disposed to repeat them.

The mere English reader will, I hope, excuse me for making use of technical terms, as being absolutely un-

avoidable: they will be easily understood by means of the figures, along with the explications; and I believe those who are more curious than knowing in botany, will get a better idea of the syngenesious flowers here than in any other book.

A DISCOURSE

ON THE

IRRITABILITY OF SOME FLOWERS.

VARIOUS kinds of motions have been observed in various Plants; but not one perhaps so curious and entertaining as that which I discovered by chance in passing by the foot of mount Vesuvius, about four years ago. There is none of you, Gentlemen, who is not acquainted with the beauty of those shores, and what incitement to contemplation the earth and sea afford to a philosophical mind. As you have done me the honour of associating me to your most illustrious society, I cannot shew in a better manner my sense of that obligation, than by giving you an account of my discovery.

I am talking to botanists, who have no need of my instructions, in order to distinguish the different classes of plants. You know already what is meant by compound flowers, which are all by Linnæus ranged under the class of Syngenesious; if indeed they ought to

be called flowers, and not rather natural groupes or masses of real floscules, whichever name you please to call them by. They stand together, surrounded by a common calyx or cup, and are supported by one stalk.

If you touch the point of one of these floscules slightly with your finger, or the point of a pin, or any other thing, immediately it moves of itself, as if awakened: nor is this motion caused by the shock, which is too gentle to produce such an effect.

How many, and what plants of this class, bear floscules of so sensitive a nature, is difficult to determine; nor do I pretend to enumerate them. I shall confine myself to such as I have made trials upon; and I presume it will not be disagreeable to have the list of them, which is but short, as it would be an endless and useless task to make trials on all the species. I shall follow the arrangement of Linnæus, and make use of his names.

The genera upon which I have made trials are the thistles, plants well known, and common in all our fields; the cnicus, much celebrated by physicians; the sawworts, that grow on the neighbouring hills; the cinaræ, the most useful of which kind is the artichoke; the distaff-thistle; the bastard saffron, which is used for dying yellow, and rose-colour; the globe-thistle with spherical heads all adorned with flowers; and the burdock with those vast leaves, growing in moist places.

Linnæus calls all these plants *Polygamiæ æquales*, alluding to the floscules, which are all exactly similar in every part of the flower. He distinguishes these farther by their particular form, which he calls tubipetalous, *i. e.* flowers that have a tube or sheath. It is probable that many others of this genus, if not all, have the same quality as those I have mentioned.

There are certain other syngenesious plants not belonging to the *polygamiæ æquales;* allow me to make use of those terms. Amongst the former is the numerous genus called *centaury;* and though many of this genus resemble the thistle, yet Linnæus has thought fit to distinguish and place them under different heads, putting the centaury amongst the *polygamiæ frustraneæ;* because amongst many perfect and fruitful floscules there are in every flower others round the edges, deficient in their construction, and consequently useless to all appearance, and certainly barren.

Out of this genus I chose, for the trials I undertook, the following species, as being one of the most sensitive, and as growing in great abundance in your fine garden, and therefore more adapted than any other to the present purpose. The species is Centaurea calcitrapoides calycibus subduplicato spinosis, foliis amplexicantibus indivisis serratis. L. Spec. Pl. The floscules in the annexed plate are taken from this plant, all made designedly bigger than nature; nay some of them vastly enlarged, such as they appear by a very great magnifier. For the

rest I shall do no more than relate what observations I have made on this species alone, being content to give a general idea of the abovementioned accident. To you, who are more skilful botanists than I pretend to be, I shall resign the pleasing task of ascertaining this discovery; for which your talents qualify you, and to which this place, and the philosophical aim of your society, naturally may invite you.

Imagine one of these floscules separated entire and undivided, if possible, from the rest of the flower; such as you see in fig. *a b c d e f*. To say the truth indeed, it is no easy matter to separate unhurt a floscule of so tender and brittle a nature from a thick croud of many similar ones, which are deeply fixed into the cup. The best way therefore is to cut through the whole mass of the flower with a sharp knife, by which means the inside being laid open to view, one of the floscules may be drawn, with a light hand, out of its natural situation.

The floscules are unripe, whilst the germen *b* being of a heart-shape, tender, and white, rises a little above the common receptacle, where it is fixed amongst that thick bush of long threads arising from the cup.

The very long style which is supported by the germ, like a column upon a base, stands perpendicular, and is included as in a vest in the corolla *c d*. The corolla,

till it gets out of the calyx, is nothing but a pipe or tube, situated upon the common base of the germ. Upon the edge of the germ stands a number of short hairs, which form a crown, and, outliving the flower, remain upon the seed when ripe; but are now small, moist, clear, and of a silver colour. That part of the corolla which is out of the cup, is larger *c*, and terminates in five points *d*; these points are of a faint violet colour. The corolla is not unlike a hyacinth.

The stigma, not yet exposed to the sun's rays, is surrounded by a sheath pointed at top *a*, of a hard texture and violet colour. This sheath is formed of five antheræ joined together at their heads. It resembles a small Gothic tower with five sides; to which are affixed five filaments, like so many ribs *i i*. The filaments surround the style *k*, which is in the middle of the corolla *c*, and are fixed in such a manner that they seem to have their roots just at the termination of the tube; where it arises out of the cup, and where the corolla, as was before-mentioned, begins to take the form of a hyacinth. It is certain, however, that in this part precisely there is observed a swelling like a ring; and that under this swelling the filaments continue to descend quite to the germ, through the whole tube. They are indeed changed into five very slender prominent stripes or slips, fastened to the internal membrane of the tube or pipe; I say internal, because the corolla is divisible as it were into two coats; and the whole outer coat may be stripped off, and the internal left.

Now, if you but just touch one of these floscules, you will behold a surprizing phænomenon. The floscule immediately becomes sensible of the touch, and moves itself; bending sometimes on one side, sometimes on another; sometimes twisting itself at the same time that it descends, and that in various ways, according to various accidents, or according to the part touched, for it generally bends itself on that side. It rises again, but slower, as if a second force constrained it to set itself right: not that it returns exactly to its first high and erect situation as before the touch. Nay I have observed in more than one, and I am sure I do not deceive myself, a sort of beginning undulation, but so short that the whole was finished in the first effort to descend, and then in giving some slight signs of rising.

It would be a new amusement, therefore, to touch gently with the finger the flowers as you meet them in the fields, and thus raise up tumults in those families of floscules: for they move confusedly different ways; as when in a public shew, if some unforeseen alarm disturbs the tranquillity of the spectators, in an instant innumerable heads are seen irregularly and variously agitated, which a minute before were ranged in the greatest order.

Once touching is sufficient to debilitate the floscules, and render them unable to move themselves again, touch as much as you please. This languor lasts three minutes

at most, till the floscule in this short repose is refreshed, and regains its first vigour.

But when the floscules are riper an accident still more entertaining happens. The farina now being mature, the floscule, when touched, not only moves as before, but the point of the tower, formed by the antheræ, is seen to open in its five sides, and a great quantity of the farina *g* is driven out; till either all that part of the farina, which cannot support itself on the point, falls whilst still fresh in a sort of cloud; or else supports itself only till the wind or the sun's beams parch and dissolve it into a dry dust. If when the floscules are nearly ripe you open the tower, but so gently that the contents may not be touched, you will find almost all the farina heaped together in the sharp point *a*, which farina is supported by the increasing point of the stigma, and remaining there shut up, takes the conic form of the hollow. But if the floscules are not so mature, the farina is found sticking to the inside of the lower part of the tower, the top being quite empty; nay, in some kinds of centaury the hollow is transparent, though not in the species under consideration, on account of its deep colour.

When the flower is more ripe, or has been often touched, the point itself of the stigma comes out covered with the farina, which by means of its glue fastens itself all round; and as it advances farther, it takes up still more of the farina, with its necklace or garland, com-

posed of very short threads *l*. For we may go so far in teazing, as it were, the floscules, that not only all the stigma may come out, but even some part of the style, if we use our utmost endeavours.

This always happens of itself when the flower grows old; and it is certain that the floscules must, without being touched, go through all these changes in the short course of their lives. But when they are arrived at this period, they are no longer sensitive; and, as if this was the beginning of death, from henceforward nothing but decay is seen. First, that turret of the antheræ, now faded along with the filaments, grows dry soon after the corolla, and lastly the style and stigma. When this falls, all the carcase of the machine falls too, leaving upon the receptacle that germ which is now become ripe fruit, and ripe seed, adorned with that crown of hairs which qualifies it for flying when the wind lays hold of it, after it is once loosened from the dry calyx. Those common play-things, which we call shuttle-cocks, made with a crown of feathers, in order to support them in the air, exactly resemble these seeds.

So that the life of these flowers is nothing but an unfolding of the parts, which is followed by death. It is therefore difficult to determine the length of its life. This only I have observed, that the heats of summer shorten it; nay, at that time the phænomena above mentioned are seen only in the cool of the morning; because all the floscules are become old and withered,

if you put off the examination of them till the great heat comes on. Again in the spring, and very near the autumn, their life is longer, and remains whole days.

Thus have I represented this extraordinary motion of the floscules; but certainly none of the parts described have any intrinsic motive faculty; nor are they sensible of this motion. Upon endeavouring to find out the secret cause of these phænomena, a thousand thoughts occurred; but not being content, I applied again to my experiments, till at length, after many fruitless trials, nature shewed herself to me, and I discovered here first in Florence the mechanism which causes this motion. My most ingenious friend Signior Raimondo Cocchi, by proposing doubts, gave an additional impulse to my curiosity; and indeed it was extremely difficult to keep the mind quiet, and bring it to be content under its ignorance. The fact is, that all depends upon the five filaments, which are placed almost entirely within the corolla *e*. These sustain that little turret of the antheræ, and with their motions cause it to descend.

Whoever has a desire to behold this scene laid open, must with great attention make use of a sharp pair of scissars, slitting the corolla longways on opposite sides, and then cutting away entirely the parts. This operation may be performed upon the floscule, even without removing it out of the flower; and when it does not succeed, it is always the fault of the operator. After this

operation appears a little piece of mechanism *i i*, composed of the straight style *k* in the middle, and of the five filaments round about *i i*. The style rises from the very bottom of the flower, and enters under the antheræ. The five filaments are bent outwards, and detached from the style, although both below and above they are united, *i. e.* at the thick part of the corolla where they end, and where they join at the base of the antheræ to the five sides of the turret. This whole machine together is not unlike a distaff.

Let us now touch the turret of this naked floscule, immediately we shall see all the arched five filaments retire towards the style, and become strait, *n n*. Indeed, on the first opening of the corolla, they are all found so, because in the operation they are necessarily touched by the knife. It is wonderful that these arches, contrary to what a geometrician would expect, upon straightening themselves, so far from growing longer, become shorter, so that the turret does not rise, but sinks, being drawn down by these five chords. Another thing still more strange happens; which is, that these filaments, when shortened, do not seem in the least bigger, either to the naked eye or by the microscope, as far as can be perceived. We can say nothing of what is invisible.

This mysterious power of motion plainly resides no where but in the five filaments; nay it appears in each

of them separately. In fact, every time we touch any of them, that alone contracts; and because the others, not being touched, do not move, that alone, by drawing the turret, makes it incline on its own side only *o*. Nor does the motion communicate itself to the others, although, by bending the upper part of the floscule, the other filaments ought of course to bend a little, as in fact it happens. If by way of amusement we touch all the filaments one after another, we shall see the turret forced to incline gradually all round, till at last it becomes quite lowered and strait, when all the filaments are contracted.

If we leave the floscule quiet, the sensitive distaff by little and little regains its first form; and the turret rises as the filaments grow longer, but never quite so high as at first. However, we must wait three minutes, as I said before, for this effect.

From what I have laid before the reader, I imagine, all the rest will easily be understood.

The filaments have an unknown power of contraction, which performs every thing, because all these motions are reduced to the descent of the antheræ. When the floscules bend on one side, it is owing to one of these two things, either that the motion was communicated unequally, and not to all the filaments at once; or that the flower was not advanced enough towards maturity, and the turret of the antheræ was too stubborn to be

opened by the impulse of the stigma, which points directly into the farina that fills the top of the turret, and is itself immature and glutinous. However, at last the turret is forced to give way, and the farina is driven out by the stigma, as water through a pipe by a piston, till by the contraction of the filaments the whole stigma gets out of the antheræ.

It is the same cause, I imagine, that makes the farina rise from the lower parts of the turret to the top. For when the filaments are strait, the tower sinks, and passes over the stigma which remains firm: hence the farina, which is ripening and becoming more easy to separate, and perhaps obstructs the narrow passage, is taken up in the way, and carried more towards the top; and when arrived thither, must promote its own exit, as it draws along with it the mass already separated, which surrounds the stigma; so that all the farina, after many operations, must at last necessarily be deposited under the point of the tower, in that void space, either small or great, which is not occupied by the stigma. From hence it is very likely that the filaments contract very frequently, by the appointment of nature, as the atmosphere, or other external causes, work upon them. But this is not all. For we may hence give an account how it happens sometimes that the immature floscules on being touched become bent more than usual, so as almost to lie down, and never rise again *l*. Nay the more the floscule is touched, the more it bends. In its immature state it happens,

that the style not being sufficiently vigorous, finds an obstacle too strong for it in the antheræ; and being pushed on by its own elastic power, is driven through one of the intervals of the distaff, in a great measure out of its natural situation *t*; because the corolla yields and gives way. The filaments then growing strait as usual by an external stimulus, the style bends always more and more, so that it cannot regain its original situation, and the whole floscule remains for ever bent. I have seen whole families of these floscules, that is, all belonging to one flower, in this unnatural state.

The whole mystery therefore is reduced to this contracting power in the filaments alone.

I have cut from the distaff a filament sometimes at the corolla, sometimes at the antheræ, so that it remained free at one or the other extremity, *p p*, and the rest were left entire. Immediately the filament stretched outward, and bent itself into a curve the opposite way, and remained so without returning to its former site; but being irritated by the touch, twisted itself in a wonderful manner when it was long and free; so that it resembled a worm.

You may cut off the whole floscule at one stroke, where the filaments are joined to the corolla, so that the corolla and the style are cut also; and then take off the corolla, and draw out the style, so that there will

remain the turret of the antheræ, with filaments fixed to it at one end, and free at the other. In this case, if you touch them, you will have a lively image of those famous heads of the polypus, which moves its delicate arms about in so wonderful a manner, as represented in fig. *s*, although here is nothing but parts of the filaments. The shorter you cut the filament the less it moves; but yet it does move. If you cut it in half, both parts move equally; and immediately upon cutting both parts always contract.

All these experiments I think demonstrate a strong power of contraction; and moreover, that this power resides in the inward structure of the filaments, independently of their natural situation, and the composition of the whole mechanism of the floscule *o*. But this is proved more fully by a more delicate experiment. A filament being cut off as long as possible at both extremities, if you touch it, though entirely separated from the rest of the floscule, it will still twist, and even a small fragment will do the same.

Farther than this I pretend not to go: nor do microscopes lend any assistance; for they discover nothing but a gelatinous and clear substance, with certain fibres easy to separate longways, if you bruise the filaments. In the axis of every filament I thought I saw a substance of a different nature, like the pith in a branch; and if you look at the cut part of a filament there appears a

white speck in the middle. It was of little consequence to observe those tender and transparent points, with which all the surface of the filament is armed, like what is seen on roses, but not all equal. These seen with the microscope resemble exactly the icicles that hang from the eaves of buildings in very cold winters. It is certain, however, that the filaments are extremely tender, pliable, and capable of stretching, when pulled out, to double their length, without breaking *xx*. Nay, after this violent operation they become shorter than ever, and visibly wrinkled even to the naked eye *y*. The microscope however shews them wrinkled at any age whenever they are contracted, and like worms when they contract themselves from fear.

We may conclude from hence, that a like wrinkling happens to them even when old, and when the floscules die off; because this experiment does not succeed so well in unripe filaments. In general, as has been already observed of the antheræ, the filaments are continually shortening, from the time the floscule is in a riper state to the last dry state. This natural and gradual contraction is well expressed by my above-mentioned friend, who designed these figures.

It is not easy to measure the duration of this contracting power. It remains longest in cool air; and these experiments are best performed by night. When the heat is great, they scarcely answer at all. The more

the filaments are contracted by age, this power becomes weaker, and is totally lost when the stigma is emerged from the antheræ. What is there now remaining for a naturalist? what but a modest silence? As I can go no farther in search of causes, I must content myself with finding out names, and not lose this opportunity, perhaps not less curious than any other whatever, of concurring with many noble late discoverers, and of joining my obscurity with their lustre. Let me then call this contracting power *the Irritability of Flowers*, a quality perhaps never so fully shewn as here, unless in relation to the fibres of the muscles. A very fit name, provided it is used to signify only a power which the mechanical writers themselves do not pretend to understand. Of what consequence then is it that our floscules are not irritable, unless after a repose of three minutes? Who can say that something similar to this is not necessary in the muscular fibres? And lastly, may it not be said, that the filaments of flowers are muscles?

I am sensible of my good fortune in speaking before you, Gentlemen; and I cannot fail of making my advantage of it, by leaving to the judgment of this illustrious society of philosophers to pursue farther these nice disquisitions, where I find myself totally at a loss.

a b, An entire floscule taken from the flower, and seen with a microscope.

b, The germ and unripe fruit with its threads, upon which the style is fixed within the corolla *c*.

c, The place where the corolla grows wider, and where the floscule comes out of the calyx or cup.

d, Five points in which the corolla being divided terminates.

e, The place where the filaments are united to the five sides of the Gothic turret *e e*.

f, The filaments which in the immature floscule appear in part out of the corolla.

g, The first descent when the turret opens, and the farina issues out.

h, A farther descent of the turret of the antheræ, with the stigma out *h*, covered with the farina.

i i, The floscule, the corolla being taken off at *c*; so that the whole turret not quite open appears, and also the distaff with the five filaments *i i* naturally arched, and in the middle of them the style *k*.

l m n, another floscule with the turret open, and as low as it can go.

l, The stigma out, along with its collar of threads, and part of the style.

m, The filaments close to the style, and contracted as when they are fresh.

o p p, A similar floscule without the corolla, seen with a small magnifier with one single filament *o*, irritated, contracted, and drawn on one side.

p p, Two filaments, one cut off at top, the other at the bottom, which are left to twist freely.

q q r s, Another floscule dissected, the filaments being cut into two parts *r s*, and the style drawn out of the turret.

t, A floscule likewise without the corolla, in order to shew the accident of the dislocation of the style, with the five filaments contracted.

u u, A floscule without the style, extended in order to shew how much the filaments *x x* may be lengthened.

y, The same floscule let loose, which shrinks, with the filaments wrinkled.

THE

SWEDISH PAN;

OR,

INTRODUCTION

TO

OBSERVATIONS ON GRASSES.

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THE SWEDISH PAN.

By NICHOLAS HASSELGREN;

OR,

OBSERVATIONS ON THE DIFFERENT PLANTS SELECTED AS FOOD BY DIFFERENT ANNIMALS; CONCLUDED WITH A COMPARATIVE TABLE OF THE GRASSES.

Upsal, 1749, *Decemb.* 9.

(Amœnit. Academ. vol. II.)

THE antients attributed the pastoral life to Pan, the care of flowers to Flora, hunting to Diana, and the cultivation of grain to Ceres. We, though acknowledging only one Deity, who governs all things, yet often use these names to denote the subject on which we undertake to treat. What word is now more known among botanists than Flora; by which they mean all those plants growing within a certain compass of ground; as

our Fauna Suecica takes in all those animals, which are natives of Sweden? For a like reason we have entitled this small tract the *Swedish Pan*; intending thereby to denote the five domestic quadrupeds, which live upon plants growing in Sweden; or the devouring army of Pan, which lays waste the provinces of the Swedish Flora. We chuse by this means to avoid a prolix definition, which is always disagreeable for the title of a book.

The pastoral life, by the testimony of both sacred and prophane history, is nearly as old as man himself; so that I would willingly derive the knowledge which I am going to deliver from the most antient times. But although plants have been constantly obvious to the eyes of every man, yet I am obliged to declare, that we have nothing delivered down to us in any book concerning the kinds of plants proper for the different kinds of cattle; so that I may be sure of not disgusting my reader with stale matter new dressed up. For the whole of what I present to him is new.

Our illustrious president, in his journey through Dalecarlia in 1734, made the first attempt this way, as may be seen Flor. Lapp. p. 158, where he says thus: "In my journey through Dalecarlia, when we had climbed up the mountains, and entered Norway, my fellow-travellers being tired, and asleep, I wandered about in a dismal wood, and perceived that the horses easily distinguished wholesome from noxious food; for, being

very hungry, they devoured all sorts of plants, except the following: *meadow sweet, valerian, lilly of the valley, angelica, loose-strife, marsh-cinquefoil, crane's-bill, hellebore, monks-hood,* and many shrubs. This gave me a hint to recommend to the curious, that they would examine what plants such animals as live on vegetables, viz. the *cow,* the *sheep,* the *goat,* the *deer,* the *horse,* the *hog,* the *monkey,* and their species, will not touch. An examination which would not be without its use, were it properly made."

Notwithstanding this recommendation, no inquiry was undertaken till our President returned home from his travels through foreign countries, and made a progress in our own provinces. Afterwards professor Kalm, that worthy disciple of so great a master, followed his example; so that in his journey to Bahus we find mention made of some plants which cattle either eat or refuse. In 1747 and 1748 our President undertook with great diligence not only to make experiments himself, but to excite his disciples and auditors to do the same; of which number I was one. Thus at last many experiments were made, and repeated, especially by Hagstrom, Mag. Liidbeck, Ekelund, Wahlbom, Montin, Oldbers, Forskahl, and Fornander; not to mention others, who strove to outdo one another in finding the plants which were suitable to different animals.

The difficulty however of examining all the Swedish plants, and obtaining animals proper for experiments, which ought all to be repeated, has hindered us from giving a complete work on this subject. But the greater part, and the most common vegetables of Sweden, being now determined by us; what is wanting may be supplied from time to time. We hinted that animals proper for experiments, such as *cows*, *goats*, *sheep*, *horses*, and *swine*, are difficult to be found, for these reasons; first, because some plants are eaten by them in the spring, which they will not touch in summer, when apt to grow rank in taste and smell, and to become stalky and hard. Thus many people eat the *nettle* in the spring, but who could bear it afterwards? Again, because some kinds of animals eat the flower, and will not eat the stalks; others eat the leaves, and will not eat the stalks *. Next, the animals ought not to be over hungry when we make our experiments, if we intend to make them properly. For at such a time they will greedily devour most kinds of plants, which they will absolutely refuse at another. Thus when they come immediately out of the stall, they are not fit for experiments, for then they are ravenous after every green thing that comes in their way: The best method is to make the experiments when they are almost full, for they are hardly ever so entirely. Moreover, the plants

* When they eat the leaves, we say in general they eat the plant, otherwise there would be few grasses they could be said to eat, Œcon. Nat.

ought not to be handled by moist hands; some animals will refuse the most pleasing and tasteful in that case. We ought to throw them on the ground, and if we find the animal refuses to eat them, we must mix them with others which we know they like; and if they still refuse them, we have a sure proof; especially if the same be tried with many individuals.

Our views do not extend beyond the Swedish plants, and that for the sake of our own œconomy. Let foreigners look to that part which concerns themselves, and thus our work will be confined within moderate bounds. We can produce above 2000 certain experiments, some of which were repeated ten times, some twice as often. If we take the Flora Suecica Holm. 1745, and put to any herb the generical name, adding the number, and some epithet by way of difference, our work will be very much abridged.

It is manifest that the vegetable world was intended for the support of the animal world; insomuch that although not a few animals are carnivorous, yet the animals which they devour cannot subsist without vegetables. In this speculation we behold with admiration the wisdom of the Creator, who has made some vegetables absolutely disagreeable to some animals that live upon plants, while these plants are agreeable to others. And there are plants, which are poisonous to some animals,

which are very wholesome to others, and on the contrary.

This did not happen by chance, but was contrived for wise purposes. For if the Author of nature had made all plants equally grateful to all kinds of quadrupeds, it must have happened, that one species being remarkably increased, another species must have perished with hunger, before it could have got into better pasture; the vegetables being spread over a large tract of ground But as it is ordained, every species must leave certain plants to certain animals, so that they always find something for food, till they meet with better pasture. In the like manner we find it contrived in relation to the plants themselves, which do not all grow in the same country and climate; but every plant has its place appointed by the Creator, in which it grows more abundantly than elsewhere. Hence we may observe, that those animals which chiefly live upon particular plants, chiefly abound in certain places. Thus the *lichen* or *liverwort*, Fl. 980, is found in greatest plenty on the cold Alps, and therefore the *rhen deer*, which in winter feed mostly upon this plant, are obliged to live there. The festuca, Fl. 94. which flourishes and spreads most on dry pastures, draws the sheep thither, which above all things delight in that kind of grass. The seeds of the *dwarf-birch*, Fl. 777, which afford the best sort of food to the *rough-legged partridge*, and the *Norway rat*, Fn. 26, tempt them to dwell in these northern parts of the world. *Camels hay*, Mat. Med. 312, which above all

plants, thrives on loose sand, draws the camel to choose those barren places, as they there find food most agreeable to them; not to mention many other similar instances. Trees, whose heads shoot up so high, that quadrupeds cannot easily reach them, afford nourishment for that reason to more numerous tribes of insects, as the *sallow*, the *oak*, the *pear*, &c.

The Creator, who most wisely established this law, has as it were imprinted it on the organs of animals, that they might not offend against it through ignorance; and as every transgression has its punishment allotted, so also no offence against the law of nature can escape. Animals, which violate this law, are punished by diseases or death; and hence we behold with admiration that brutes which were designed to be guided by instinct cannot be prevailed upon to act against it. If by chance any animal offends this way, and suffers for it, we vulgarly say it has taken poison; so that ignorant people wonder, not to say murmur, at the wise disposition of the Creator, who has produced so many noxious plants; though without sufficient reason: for no one plant in the world is universally poisonous; but all things are good, as they came from the hands of the Creator.

Physicians often mention that this or that plant is deadly, because its particles are of a nature apt to wound the fibres of the body, or corrupt the juices. But this is only respectively to the species of animals:

for instance, the *sun-spurge*, Fl. 536, has a milky juice, which causes blotches in our skin, and hurts our fibres, and therefore it is said to be poisonous: yet the *moth*, Fn. 825, almost entirely lives upon this plant, and prefers it both for taste and nourishment to all others. Thus one animal leaves that, which to itself is poisonous, to another animal, which feeds upon it deliciously. *Long-leaved water hemlock* will kill a *cow*, whereas the *goat* browses upon it greedily. *Monks-hood* kills a *goat*, but will not hurt a *horse*; and the *bitter almond* kills a *dog*, but is wholesome food for *man*. *Parsley* is deadly to *small birds*, while *swine* eat it safely; and *pepper* is mortal to *swine*, and wholesome to *poultry*. *Thus every creature has its allotted portion.*

Animals distinguish the noxious from the salutary by smell and taste. Younger animals have these senses more acute, and therefore are more nice in distinguishing plants. An empty stomach will often drive animals to feed upon plants that were not intended for them by nature. But whenever this has happened, they become more cautious for the future, and acquire a certain kind of experience; *e. g. the monks-hood*, which grows near Fahluna, is generally left untouched by all the animals that are accustomed to these places; but if foreign cattle are brought thither and meet with this vegetable, they venture to take too large a quantity of it, and are killed *.

* The same thing has been told me by the country people in Herefordshire in relation to *meadow-saffron*, which grows in plenty

The cattle that have been reared in the plains of Scania and Westrogothia, commonly fall into a dysentery when they come into the woodland parts, because they feed upon some plants, which cattle used to those places have learned to avoid. In the spring, when the *water hemlock* is under water, so that the cows cannot smell it, they die in heaps *. But when the summer has dried the ground, they are very careful not to touch

in some parts of that county. Gmelin, Fl. Sibirica, p. 76, says that cattle eat the leaves of the *hellebore*, 40, when they first spring out of the ground, and are thereby killed.

* This affair is of so much consequence to the farmer, that I think it right to transcribe a passage out of Linnæus upon this subject.

"When I arrived," says he, "at Tornea, the inhabitants complained of a terrible disease, that raged among the horned cattle, which upon being let into the pastures in the spring, died by hundreds. They desired that I would consider this affair, and give my advice what was to be done, in order to put a stop to this evil. After a proper examination, I thought the following circumstances worth observing.

1. The cattle died as soon as they left off their winter fodder, and returned to grazing.

2. The disease diminished as the summer came on, at which time, as well as in the autumn, few died.

3. This distemper was propagated irregularly, and not by contagion.

4. In the spring the cows were driven into a meadow near the city, and they chiefly died there.

5. The symptoms varied much, yet agreed in this, that the cattle, upon grazing indiscriminately on all sorts of herbs, had their bellies swelled, were seized with convulsions, and in a few days expired with horrible bellowings.

it. It is also true, that all vegetables prohibited by nature to particular animals are not equally pernicious; and therefore though through necessity and hunger they eat them, yet they do not immediately die; but it is certain that they cannot have from thence good and proper nourishment.

* *

6. No man dared to flay the recent carcases, as they found by experience, that not only the hands of such as attempted it, but their faces too had been inflamed, and mortified, and that death had ensued.

7. The people enquired of me, whether there were any kinds of poisonous spiders in that meadow, or whether the water which had a yellowish tint was not noxious.

8. It was not a murrain, was clear, because the distemper was not contagious, and because that distemper is not peculiar to the spring. I saw no spiders but what are common all over Sweden; and as to the water, the sediment at the bottom, that caused the yellowness, was nothing but what came from iron.

9. I was scarcely got out of the boat, which carried me over the river into the meadow, before I guessed the real cause of the disease. For I there beheld the *long-leaved water hemlock*. My reasons for guessing this were as follow.

10. Because in that meadow, where the cattle first fell ill, this poisonous plant grows in great plenty, chiefly near the banks of the river. In other places it was scarce.

11. The least attention will convince us that brutes shun whatever is hurtful to them, and distinguish poisonous plants from salutary by natural instinct: so that this plant is not eat by them in the summer and autumn, which is the reason that in those seasons few cattle die, viz. only such as either accidentally, or pressed by extreme hunger, eat of it.

12. But when they are let into the pastures in spring, partly from their greediness after fresh herbs, and partly from the emptiness and

The end of this kind of knowledge is not bare curiosity, although were this the case every part of knowledge, which sets forth the stupendous works of the Creator, is never to be looked upon as of no consequence. On the other hand, we do not pretend to gain any medicinal advantages from these speculations, namely, to be able from hence to conclude, that this or that plant is noxious to man, because it is so to this or that brute animal. Nor do we for that reason approve of Wepfer's experiments upon dogs, and other animals, as if any

hunger which they have undergone during a long winter, they devour every green thing which comes in their way. It happens moreover that herbs at this time are small, and scarcely supply food in sufficient quantity. They are besides more juicy, are covered with water, and smell less strong, so that what is noxious is not easily discerned from what is wholesome. I observed likewise, that the radical leaves were always bitten, the others not; which confirms what I have just said.

13. I saw this plant in an adjoining meadow mowed along with grass for winter fodder; and therefore it is not wonderful, that some cattle, though but a few, should die of it in winter.

14. After I left Tornea I saw no more of this plant till I came to the vast meadows near Limmengen, where it appeared along the road, and when I got into the town I heard the same complaints as at Tornea, of the annual loss of cattle, with the same circumstances.

15. It would therefore be worth while to eradicate carefully these plants, which might easily be done, as they grow in marshy grounds; and are not hard to find, as they grow by the sides of pools or rivers. Or if this could not be done, the cattle should not be suffered to go into such places, at least during the spring. For I am persuaded, that later in the year they can distinguish this plant by the smell alone.

knowledge can be thence gained in regard to man. No, the end we aim at is merely œconomical.

1. From these experiments we may know whether certain pastures afford good nourishment for this or that species of animals. We see *heifers* waste away in enclosures, where the *meadow-sweet* grows in abundance, and covers the ground so that they can scarce make their way through it; the country people are amazed, and imagine that the pasture is too rich for them; not dreaming that the *meadow-sweet* affords them no nourishment. Whereas the *goat*, which is bleating on the other side of the hedge, is not suffered to go in, though he longs to be browsing upon this plant, which to him is a most delicate and nourishing food *.

2. From these experiments we may almost be sure by affinity and analogy, whether meadows or pastures are salutary or noxious to particular animals; for example, long experience has taught us that our sheep take up poison in marshy grounds, though no one till lately knew what was the particular poison. Yet the *spiderwort* 267, the *mouse-ear scorpion grass* 149, the *mercury* 823, the *sun-dew* 257,8, the *hairy wood grass* 287, the *lesser spearwort* 458, the *butter-wort* 21, have evidently sus-

* See a sensible article on "The Extirpation of Plants noxious to Cattle on Dairy and Grazing Farms, and the Cultivation of such as are wholesome and nutritious, recommended; by Mr. Benjamin Axford;" Transactions of the Bath Agricultural Society, vol. I.

picious marks *. I will therefore propose a new experiment. The *andromeda* Fl. Virgin. 160, is known to be a most rank poison to sheep in Virginia. The *andromeda*, called by the people of New York *dwarf laurel*, Cold. Act. Upsal. 1743, p. 123, is very fatal to the sheep in New York. These two plants are of a different species, but of the same natural genus, and therefore have the same virtues. Amongst us, especially in the Northern parts, the wild *rosemary*, *andromeda* 335, grows every where in marshy grounds, which being of the same natural genus with the foregoing, we may reasonably conclude that it destroys our sheep. To this we may add, that it is on account of three other species of *andromeda* 336,7,8, which grow on the Lapland mountains, that the sheep there never are healthy; and lastly although the *cistus ledon* 341 is not a species of *andromeda*, yet, being of the same natural class, it is not unlikely but that this plant is far from affording good nourishment to sheep. This conjecture gives our shepherds an unexpected opportunity of making experiments with their sheep; and indeed they cannot omit to do it without being justly blameable, since on this the health of their whole flock depends. It is particularly to be noted upon this occasion, that the botany of America, a country so far disjoined from us, gives a hint for consi-

* There is great reason to think, that what makes low grounds so noxious to sheep is not the moisture, but the plants that grow there. For it is observed by shepherds that the great danger to sheep is immediately after a fresh spring of grass, which I imagine is owing to their licking up the young and tender shoots of poisonous plants along with their proper food, not being able to distinguish them.

dering things of the greatest use, of which the antients did not so much as dream.

3. From hence the œconomist may truly judge of his meadows, and know that some are vastly preferable to others for certain animals. For although cattle, pressed by necessity and hunger, will feed upon vegetables less grateful to them; yet it is not to be doubted but that they are not equally nourished by these as by others. Thus the Dalecarlians are obliged in a scarcity of wheat to support themselves by *bread* made of the *bark* of the *pine*, yet it does by no means follow from hence that this affords proper nourishment. We see that *horses* in time of war, when pressed by extreme hunger, will eat *dead hedges*, but we cannot hence conclude that wood is good food for them.

4. The industrious farmer may judge from hence, when he sows his meadows with hay seeds for pasture, that it is not indifferent what kinds of seeds he chooses, as the vulgar think. For some are fit for *horses*, others for *cows*, &c. *Horses* are nicer in choosing than any of our cattle; *siliquose* and *siliculose* plants particularly are not relished by them. *Goats* feed upon a greater variety of plants than any other cattle; but they chiefly hunt after the extremities and flowers. *Sheep*, on the contrary, pass by the flowers, and eat the leaves. Not to mention the different disposition in different animals as to grazing near the ground or not. The countryman who understands these things, and knows how in con-

sequence to dispose of his grounds, and assign each kind of cattle to its properest food, must necessarily have them more healthy and fat than he who is destitute of these principles. The good œconomist will observe the same of his hay. For although many herbs, when dry, are eaten, which when green would be refused, it does not follow from hence that they yield good nourishment. Much might be added concerning the propensity of cattle to this or that plant, which the compass of this small tract will not admit of; for instance, that *sheep* above all things delight in the *festuca* 95, and grow fatter upon it than any other kind of grass; that *goats* prefer certain plants, but being led by an instinct peculiar to themselves, they search more after variety, and do not long willingly stick to any one kind of food whatever; that *geese* are particularly fond of the seeds of the *festuca*, Fl. 90; that *swine* greedily hunt after the roots of the *bull-rush* 40, while they are fresh, but will not touch them when dry. Hence it appears, that it is in vain to contrive engines to extract the roots of the *bull-rush* out of the water, and dry them for the use of these animals in winter. Because these animals spoil the meadows where the *scorzonera* grows, in order to come at its root, which they delight in; and also the fields, to get at the roots of *clowns-all-heal*, the husbandman imagines they do good to his fields by ploughing the ground and eating the roots of *couch-grass*, whereas they never touch them, but when pressed by the utmost necessity *.

* In the same way with us it is a common notion that *cows* eat the *crow-foot* which abounds in many meadows, and that

To give a view of my design in a few words. I have disposed the plants mentioned in the Flora Suecica according to their numbers; and, to be as short as possible, it was necessary to add the generical name with a short and incomplete epithet, which however may be illustrated out of the Flora itself. I have distinguished the cattle against every plant into five columns. The first of which contains *oxen*. The second *goats*. The third *sheep*. The fourth *horses*. The fifth *swine*. By the mark (1) I have denoted those plants which are eaten; by the mark (0) those which are not eaten; by both together those which are sometimes eaten, sometimes refused; or are eaten when cattle are more used to them, and are more hungry; otherwise not.

Upon the first view of this subject the reader will perceive, that it is not treated completely, so that every

this occasions the butter to be yellow, from whence I suppose it is generally known by the name of the *butter-flower*. But this I believe is all a mistake, for I never could observe that any part of that plant was touched by *cows* or any other cattle. Thus Linnæus observes, Fl. Lapp. p. 195, that it was believed by some people that the *marsh-marygold* made the butter yellow, but he denies that cows ever touch that plant. Yet he thinks that all kinds of pasture will not give that yellowness; and then observes that the best and yellowest butter he knows, and which is preferred by the dealers in those parts to all other butter, was made where the *cow-wheat* grew in greater plenty than he ever saw any where else. This shews how very incurious the country people are in relation to things with which they are every day conversant, and which it concerns them so much to know.

Swedish plant is pointed out, and by what animals it is eaten. What generally happens upon breaking up old pasture-lands, *viz.* that for the first years it cannot be cleansed from all useless weeds, and be laid down fine like a garden, but will here and there have rough tumps and hard clods, unless we will let it lie fallow for a very long time; the same, or something like it, has happened upon this occasion.

I am apt to believe, however, that the reader will be better pleased that I have opened this new scene, than if I had waited longer in order to gain farther light. For since there are many people here curious in botany and œconomy, I hope they will all lend a helping hand, that I may one day be enabled to give a more complete edition of this piece *.

* After this in the original follows a long table of experiments, of which I shall only give a small specimen; as the whole would increase the bulk but not the value of this piece to readers for whom this translation is intended; since they would neither know the plants by the names the author has given them, nor by any I could put in their room. However, I shall for curiosity give a specimen, and add the general result of his experiments; just as he has marked it at the end of his table; which is as follows: "Thus far," says he, "we have given 2314 experiments; from these it appears that

Oxen eat	276	refuse	213 plants.
Goats	449		126
Sheep	387		141
Horses	262		212
Swine	72		171

And thus these animals leave untouched 868 plants.

These animals will not eat any kind of *moss*.

The goats are very fond of the *algæ*.

Some of them greedily devour the *fungi*, others will not taste them. But we recommend farther trials in relation to these matters."

Then follows an account of some trials made by Dr. Hagstrom to the same purpose in relation to *rhen deer*, but, as they no ways concern us, I have omitted to mention them.

N. B. For the table I have chosen not to take such plants as occurred first in my author, but to select the grasses of our own country, and have given English names to them of my own invention, the reason of which will appear in the following observations.

	Oxen	Goats	Sheep	Horses	Swine
Spring-grass	1	1	1	1	-
Mat grass	10	1	1	1	0
Canary grass, *reed*	1	1	1	1	0
Cat's-tail, *meadow*	1	1	0	1	0
Fox-tail, *meadow*	10	1	1	1	10
——— *flote*	1	1	1	1	0
Millet grass	1	1	1	-	-
Bent grass, *silky*	-	1	0	1	-
——— *fine*	1	1	-	1	-
Hair grass, *small-leaved*	1	1	1	1	-
——— *water*	1	-	1	1	-
Meadow, *creeping*	1	1	1	1	0
——— *annual*	1	1	1	1	1
——— *great*	1	1	1	1	1
——— *narrow-leaved*	1	1	1	1	1
——— *common*	1	1	1	1	1
Cock's-foot grass, *rough*	0	1	1	1	0
Dog's-tail grass, *crested*	-	-	-	1	-
——— *blue*	-	1	1	1	0
Fescue grass, *flote*	0	1	1	1	10
——— *purple*	1	1	1	1	-
——— *sheep's*	1	1	11	1	-
Brome grass, *field*	1	1	1	1	-
——— *spiked*	-	1	1	1	-
Oat grass, *meadow*	1	1	1	1	-
——— *bearded*	-	10	-	-	-

OBSERVATIONS

ON

GRASSES.

OBSERVATIONS ON GRASSES.

SECTION I.

On the prevalent method of laying down to grass. Directions for gathering seeds fit for that purpose.

AS the Swedish Pan contains some observations on grasses * that are quite new, and as this affair is of the utmost importance to the husbandman, I shall subjoin some observations of my own relating to the same subject.

It is wonderful to see how long mankind have neglected to make a proper advantage of plants which in almost every country are the chief food of cattle. The farmer, for want of distinguishing and selecting good

* By grasses are meant all those plants, which have a round, jointed and hollow stem, surrounded at each joint with a single leaf, long, narrow and pointed, and whose seeds are contained in chaffy husks. It appears by this definition, which is Ray's, that all the kinds of grain, as wheat, oats, barley, &c. are properly grasses, and that the broad, the white, the hop, &c. clovers are not grasses, though so frequently called by that name.

seed, fills his pastures with weeds, and bad or improper grasses; when, by making a right choice, after some trials he might be sure of the best grass, and in the greatest abundance that his land admits. At present, if a farmer wants to lay down his land to grass, what does he do? he either takes his seeds indiscriminately from his own foul hay-rick, or sends to his next neighbour for a supply. By this means, besides a certain mixture of all sorts of rubbish, which must necessarily happen; if he chances to have a large proportion of good seeds, it is not unlikely that what he intends for dry land may come from moist where it grew naturally, and the contrary.

I have had several opportunities of observing instances of this slovenly kind of husbandry, and its effects. Instead of covering the ground in one year with a good turf, I have seen it filled with weeds not natural to it, and which never would have sprung up, if they had not been brought there.

Arguments are never wanting in support of antient customs, and I am no stranger to the arguments, such as they are, which prejudice and indolence have made use of on this occasion.

1. Some say, that if you manure your ground properly, good grasses will come of themselves. I own they will. But the question is how long it will be before that happens, and why be at the expence of sowing

what you must afterwards try to kill by manuring? which must be the case, as long as people sow all kinds of rubbish under the name of hay seeds. Again, if the best way is to let the ground take its chance, why is the farmer at the expence of procuring the seeds of the white, and broad clover, which come up in almost all parts of England spontaneously? But if this is allowed to be the best way in relation to clover of any kind, what reason can be in nature, why grass seeds only ought not to be sown pure?

2. Others say, that it is better to have a mixture of different seeds. I will suppose this to be true. But cannot a mixture be had though the seeds be gathered, and separated; and is not a mixture by choice more likely to be proper, than one by chance? especially after sufficient experience of the particular virtues of each sort, the different kinds of cattle each grass is most adapted to, the different grounds where they will thrive best, &c. all which circumstances are now in general wholly unknown, though of the utmost consequence.

3. It is said by some, that weeds will come up along with the grass. No doubt of it. Can any one imagine that grass seeds should be exempted from what happens to every other kind of seed. But I will venture to say that a far less quantity of weeds will spring up than they imagine, if it be sown very thick. Men must be very much pressed when they make such objections. I am

almost inclined to say with a great writer, "It is a simple thing to take much pains to answer simple objections."

This might appear too slovenly a method of proceeding, to prevail universally; yet this is the case as to all grasses except the darnel, and what is known in some few counties by the name of the Suffolk grass; and this latter instance is owing, I believe, more to the soil than any care of the husbandman. Now, would the farmer be at the pains of separating once in his life half a pint or a pint of the different kinds of grass seeds, and take care to sow them separately; in a very little time he would have wherewithal to stock his farm properly, according to the nature of each soil, and might spread these seeds separately over the nation by supplying the seed shops. The number of grasses fit for the farmer is, I believe, small; perhaps half a dozen, or half a score, are all he need to cultivate, and how small the trouble would be of such a task, and how great the benefit, must be obvious to every one at first sight.

Would not any one be looked on as wild who should sow wheat, barley, oats, rye, pease, beans, vetches, buck-wheat, turnips, and weeds of all sorts together? yet how is it much less absurd to do the same thing in relation to grasses? Does it not import the farmer to have good hay and grass in plenty? and will cattle thrive equally on all sorts of food? we know the contrary; for

horses will scarcely eat hay that will satisfy oxen and cows. Sheep are particularly fond of one kind of grass, and fatten on it faster than on any other in Sweden, if we may give credit to Linnæus. And may they not do the same in England? how shall we know till we have tried? Nor can we say that what is valuable in Sweden may be inferior to many other grasses in England; since it appears by the Flora Suecica, that they have all the good ones which we have. But however this may be, I should rather choose to make experiments than conjectures.

The grasses which I recommend as most profitable, are the following:

The *Vernal*, the *Meadow Fox-tail*, the *Mountain Hair*, the *Annual*, *Common*, and *Great Poas*, the *Meadow* and *Sheep's Fescue*, the *Yellow Oat*, and *Crested Dog's-tail*, and *Fine Bent*. Of these the *Fine Bent* and *Crested Dog's-tail* seem to me to be most worth gathering; as they afford excellent pasture for horses, oxen, sheep, and deer, suit almost every kind of soil, and yield a large quantity of very good hay.

Next to these I should reckon the *vernal*, for most of the reasons above given, and also because it springs early. After this, in my opinion, comes the *sheep's fescue*, as being so excellent for all high, dry, and warm lands proper for sheep. Then follows the *yellow oat*, as being proper for loamy lands, where sand predominates, and not improper for richer grounds. I

I place the *fox-tail* and *poas* after these, because, though they afford perhaps the finest pasture and hay of all grasses, yet they will not, I believe, remain long on any ground that is not extremely rich, such as is found about London.

The present way of laying down to grass is so manifestly absurd, that I need not enlarge on the importance of gathering clean seeds*, and cultivating them in such a manner that each kind, according to the discretion of the farmer, may be produced at a reasonable price. I shall therefore proceed to give a few hints relative to the mode of gathering which I would recommend.

* See some sensible remarks on the execrable mode of using hay-seeds, without proper selection, in Marshall's Rural Economy of Gloucestershire. "Hay-seeds," he says, "is an indefinite term. Seeds collected from hay of a well herbaged ground, cut young, shook or threshed upon a floor and sifted through fine sieves, to exclude the large seeds of weeds with which all old grass-lands abound, might be eligible, provided still purer seeds cannot be had. But what is generally thrown upon land under the denomination of *hay-seeds*, is a collection of the seeds of the rankest weeds, with few or none of those of the finer grasses." After mentioning the improvements in some pastures by the first method, he adds, "On the contrary, I have had opportunities of observing several instances of lands which have been laid down with hay-seeds, and which as at present lie a disgrace to English agriculture." Marshall's Rural Economy for vale of Gloucester, vol. I. p. 160. The Rev. Mr. Swayne also sent a well-digested article on this subject, with specimens of grass seeds, to the Bath Society; to which we refer the curious Reader as containing much wholesome advice on this important part of rural economy, vol. I. p. 76. The grasses from which he collected the seeds, were the Annual, great and common Poas, the Vernal, Meadow Fox-tail, and Flote Fescue.

I have made frequent experiments how easy it is to gather the seeds of grasses, having often employed children of ten or eleven years old, who collected many sorts without a mistake, after I had once shewn them those which I wanted. I thus procured sufficient quantities of several species to begin a stock.

* * *

In 1761 a little boy by my directions gathered as much of the *crested dog's-tail* in three hours, by the side of a road, as, when shed, yielded above a quarter of a pound avoirdupois weight, free from husks. As this seed is small, the skilful will easily judge how far a quantity would go if properly managed.

My very estimable and ingenious friend Mr. Aldworth *, who was witness of the fact which I last mentioned, at my desire, ordered a part of a meadow, near his seat at Stanlake, which had better grasses and less mixed than the rest, to be left unmowed till the seeds were fit for gathering. This piece yielded upon threshing and sifting, a full bushel by measure of almost pure seed of the *crested dog's-tail.* In case any one should be inclined to follow his example, I think it highly necessary to observe, that care must be taken to mow the grass before it sheds; that it be mowed early in the morning before the dew is off the ground, and that it ought not to be spread as in making hay, but left as it falls from the scythe a sufficient time, and then just turned over.

* Afterwards Mr. Neville.

On the 2nd of August 1763, I began to employ, in Yorkshire, several children about eleven or twelve years old to gather the *crested dog's-tail.* I gave to each of them three-pence a day. In four days, two of which were so rainy that they could not work above half the day, they gathered as much as yielded by rubbing and threshing two pecks and a half, full measure, of perfectly clean seed. The whole expence was seven shillings. This quantity is more than sufficient by the judgment of three different farmers, eminent for their skill, to sow an acre of land. The farmers in the parish where this seed was gathered, are obliged by lease, when they lay down, to sow twenty-four bushels an acre of hay seeds, which cost six pence a bushel at Hull, whither it is brought from Durham. So that the expence is twelve shillings an acre, to lay down with the vilest trash I ever saw. I have now a specimen, in which, what little seed there is, is the soft grass, the very worst I suppose that comes out of the ground, except the hard grass and couch. I had afterwards a peck of the same *dog's-tail* seed, quite pure, gathered in one day by some children, which cost me 27 pence. N.B. I sowed some of this seed August 22, which came up September 1.

It appears by the foregoing account, which is taken from my journal, that the pure seed of the *dog's-tail* picked by hand costs less for the same quantity of land than the foul hay seeds, even at 3*d.* a day to each child, which is one half more than I might have paid.

But then we ought not to suppose, even if every kind of grass, in every place, were as easy to gather as the dog's-tail, that we can find children enough in many places to collect a sufficient quantity of seed in one year to sow a large piece of ground. For, supposing that eleven children can gather enough in one day to sow half an acre, there being not above a month's time to gather most sorts of seed, the whole quantity will amount to no more than what will serve for about fifteen acres, even taking the favourable account of two pecks an acre, which perhaps may be found too little.

On Aug. 16, 1763, I began to employ children to gather the *fine bent*. They gathered as much as yielded eleven pints, which cost me 12*s.* at 3*d.* a day, to each child. In the opinion of two farmers, a gallon of this seed will go as far as two gallons or a peck of the *dog's-tail*. Supposing this to be the case, the *bent* will cost about four times as much as the dog's-tail, if the bent be as difficult to gather in other places as where I was; but I believe that is not the case.

Aug. 23, 1763. Another grown person and myself, with two children, gathered five pints of the seed of the *meadow fescue*, between the hours of ten in the morning and two in the afternoon, though we went over a great deal of ground. I will suppose that the two children could have gathered as much at least by themselves during the whole day. In that case, the five pints would have cost six-pence. I will suppose again, that four pecks

of this seed would be necessary to sow an acre, as the seed takes up much more room than the *dog's-tail.* Then it will cost only near seven shillings to sow an acre with pure seed picked by hand.

September 14. Eight children, in one day, gathered as much of the *meadow cat's-tail* as yielded one bushel and nine pints not cleared from the husks. If it had been cleared, I question whether it would have measured nine pints. I do not consider this among the profitable grasses. I was tempted to gather it for trial, as it was more plentiful than I had observed in other places. If it should prove otherwise, it appears that this will come cheap; for the seed, when perfectly cleaned, is so small, that I imagine it will go as far as the fine bent. In this case an acre may be sown for four shillings. N. B. This is what is called *Timothy grass,* lately brought from New England, as I am assured by a skilful botanist, who has raised it from the seed.

I had some of the *yellow oat* gathered; but, as the quantity was not great, I did not think it worth while to measure it, or note down what it cost me. It takes up a great deal of room, and therefore I cannot guess how much an acre will require.

In former years I have had, besides these, several other kinds of grasses, gathered in Norfolk, Berkshire, and Herefordshire: as the *sheep's fescue,* the *vernal,* the *hard fescue,* the *poa's* or meadow grasses, and the *fox-tail,* some

in greater, some in less quantities; and, though I did not keep an account, yet, by conjecture, I think the difficulty and expence of gathering them would not be greater than those I gathered in Yorkshire, except the *poas*. In the expence of laying down in the common way the carriage ought to be considered; *viz.* Thirty acres will require seven hundred and twenty bushels of hay-seeds, whereas fifteen bushels of *dog's-tail* are sufficient.

I gathered as much seed of the *poa trivialis* at Merton as measured a quart and one-eighth, and weighed a full half-pound. It cost me 2*s.* 6*d.* paying above double what I ought to have done. At this rate an acre might be sowed for 10*s.*

I had eleven pints of the *fine bent* seed gathered August 16, at Waghen, in Yorkshire, which cost me 12*s.* The seed of this is much harder to gather than that of the *dog's-tail*, the stems being lower than the other grasses; but the seed is so much smaller, that a gallon will go at least as far as a peck of the *dog's-tail*. They lay in Holderness twenty-four bushels of seed *per* acre from the hay-loft, as obliged by lease; and give 2*s.* 6*d.* a coomb (equal to four bushels), which comes to 15*l.*

Nine pints and a half of the *dog's-tail*, gathered in one day by nine children without threshing, and six and a half by threshing, so that the whole is 2*s.* 6*d.* a peck. *N. B.* I gave 3*d.* a day to each child. Two pecks of

this would be enough for an acre; and consequently to lay down an acre would only cost 15*s.*

To the expence of gathering and dressing one hundred and sixty pounds of *crested dog's-tail* grass-seed, four pence halfpenny *per* pound, 3*l.* 0*s.* 4*d.* To the expence of gathering twenty pounds of fine *bent-grass* seed, fourteen pence halfpenny *per* pound, 1*l.* 4*s.* 2*d.* This quantity is sufficient for ten acres; or, eight shillings and five pence farthing *per* acre.

In sowing from the hay-loft, twenty-four bushels *per* acre are required, which, at six-pence *per* bushel, make 6*l.* for ten acres, or 12*s.* *per* acre.

Sixteen pounds of *dog's-tail*, and two pounds of *fine bent*, are required *per* acre. Also a bushel of *rye-grass* and six pounds of *white clover*.

The sale of grass seeds is become a trade at Yarum in Yorkshire: the price is one shilling *per* bushel. After threshing, the hay is good for young cattle and idle horses. There are three ways of sowing grass-seeds: 1. In August: 2. With barley, which is most used: 3. With rye or wheat in March. The first way is the best; and the second better than the last. The quantity usually sown is twelve bushels *per* acre; four pounds of hop or white clover; and some add two pounds of rye-grass. After the crop is cut they fence, and admit no cattle till the next hay-harvest, when it

may be either mowed or fed; but there is danger from the cattle, if fed. The farmers generally mow the first crop for the seeds, which will afford more than afterwards. They roll as soon as the barley is cut; lay the dung after taking the first crop; and prepare the land with lime.

At Woodmanston in Surrey, June 24th, 1765, I counted 420 seeds in one single ear of the *poa trivialis*, or common meadow grass, which was not remarkably large. At Merton in Surrey, in the same month and year, I counted on one single root of the same grass twenty flowering stems, and near forty radical leaves; suppose the ears of these, one with another, to contain three hundred seeds, then the produce would be six thousand seeds from one stem. At the same place and year, June 29, I counted in one ear of the said grass four hundred and thirty seeds. Four quarts, wine measure, of the *poa trivialis* seed, pure, weighed two pounds Avoirdupois, gathered at Woodmanston June 1765. A pint, wine measure, of the *poa annua*, or *annual meadow grass*, weighed something more than a quarter of a pound, gathered at the same time and place.

It remains, however, to be considered, what difference in the reward for the different seeds may be proper; because some are found in greater plenty than others, some are easier cleared from the husks, and some will go farther, as being much smaller. Thus the *crested dog's-tail* and *fine bent* are plentiful in most counties. The *dog's-tail* is gathered easier than the *bent*;

but then, perhaps, a gallon of the *bent* will go as far as a peck of the *dog's-tail.* The *vernal* is easily gathered; but very difficult to be cleared, on account of its crooked awn. The *fox-tail* is found in plenty about London, and in some other places, and is readily cleared by mere stripping; but then it must be watched, for almost as soon as it is fit to strip, it drops its seeds *. The *sheep's fescue* is found only on dry sheep-pastures, and a good deal of ground must be gone over to get any great quantity of its seed; but when found it is extremely easy to gather, and strip clear at once. The *yellow oat* is in some places very common, and easily gathered; but then it takes up much room, so that I suppose a peck of it would not go so far as a gallon of the *dog's-tail.* The *poas*, or meadow grasses, are perhaps the most difficult of all to gather, as they are very scarce in most places; and where plentiful, as about London, it is difficult to obtain ripe seeds. Hence they deserve the greatest reward, particularly the *annual meadow grass*, of which I never could get any quantity, as this ripens very unequally, not only in different plants, but in the same plant, and even the same ear. What I have gathered ripe I always found growing in the shade. I wish some one would discover the right method of gathering this seed, as it would be very acceptable to many people for rich lawns about a house; for this grass throws out roots at its joints, and therefore rolling must make it spread extremely, and grow thick and matted. The *turfy hair* grass is not difficult to find, or to gather.

* A decisive experiment made with *fox-tail*, by Mr. Majendie, is recorded in Mr. Young's "Annals of Agriculture." M.

Secondly, With regard to the quantity of reward which ought to be offered, I will not pretend to give my opinion. I will only observe, that perhaps the choice of an honorary medal, or of money, according to the inclination of the gatherer, might not be improper. I mention this, because, upon talking with an ingenious farmer, who is zealous in this affair, he told me that he should not dislike to put in for the medal, but would not be a candidate for money. I will add, that it seems right to offer the reward for weight, and not measure; and to give no reward for mixed seeds; for the first and principal object ought to be to obtain a sufficient quantity of clean seeds for a crop. When that is done, the interest of the farmer will lead him to the rest.

Thirdly, I think specimens of the different kinds of grasses required should be advertised as ready for delivery to any person who might desire them. I know from experience that an ear of almost every one of them is sufficient to instruct the most ignorant person; having never found any of the children I employed make a mistake, after being once shewn an ear of the grass which I wanted, except in one sort, *viz.* the *fine bent*, which is very like the *marsh bent*. But this error may be prevented, by requiring that the *fine bent* be gathered on dry and high land; and observing, that though the ignorant cannot, yet the skilful can, distinguish it from the *marsh bent*; and therefore those who do not conform to

the condition prescribed will certainly lose the premium *.

* It is very singular that, notwithstanding the sensible observations and decisive experiments of Mr. Stillingfleet, supported by the recommendations of the most judicious agriculturists, and the premiums offered by the Society for the encouragement of Arts, that lawns and pastures are in general still laid down to grass in the same slovenly and injudicious manner as formerly.

We are not without hopes that this injudicious practice will be eradicated in time; and we consider, as one of the most effectual means for promoting this purpose, the exertions of the late Mr. William Curtis, author of "The Flora Londinensis." We learn that he selected packets of the most approved seeds for the use of agriculturists. The six kinds which have particularly employed his attention are the *Sweet Scented Vernal*, *Meadow Fox-tail*, *Smooth Stalked Meadow*, *Rough Stalked Meadow*, *Meadow Fescue*, *Crested Dog's-tail*. These Seeds are to be had in his Botanic Garden, Brompton. See his excellent Practical Observations on the British Grasses. 1805.

SECTION II.

TABLE OF ENGLISH GRASSES.

I NOW purpose to add a few observations on some of our grasses; but as there has reigned hitherto the greatest confusion in the English names of these valuable plants; and as they have never been properly arranged except by Linnæus, I shall first, in imitation of that great author in his Flora Suecica, give new generic and trivial names sufficient to distinguish the species of all our English grasses *. I mean all those which are found in that author; as for the rest, since some are omitted by him, their names may be easily supplied when their genera are settled by the learned †. It happens very luckily, that our common people know scarce any of the grasses by name, so that something may be done to remove this confusion, if a list of names be settled by such as are likely to have influence sufficient in these matters. As to my own list, it is only meant as a hint for others.

* Mr. Hudson having thought proper to adopt my names with some alterations; and having cleared up many of the species of grasses in a better manner than has been done before; I have referred throughout to his Flora Britannica, which is likely to be in the hands of all who are curious in botany.

† This has since been done in some measure in Hudson's Flora Britannica.

'In giving names I have had two things in view. First, to retain as much as possible such as have hitherto been used for some species of the genus. Secondly, where that could not be done, to give such as are of easy and familiar pronunciation to our common people, and at the same time approach as near as possible to the Latin names in sound, where they could not be interpreted. This was done for the sake of the learned, for a more easy recollection of the botanical name. Thus I have called the aira, *hair*-grass, the bromus, *brome*-grass, &c. in others I have merely translated the Latin name, as alopecurus, *fox-tail* grass, cynosurus, *dog-tail* grass, &c.

After these preliminary observations I hope it will not be necessary to make any apology for this liberty. I am certain that till names properly adapted be invented, we have little chance of seeing any general reformation in this branch of husbandry; and even after this, unless some person properly qualified should direct the country people, and shew them the grasses with their names, nothing will be drawn from that useful doctrine delivered in the Swedish Pan *. But it is to be

* Many people having expressed a desire that I should have plates of some of the profitable grasses added to this piece, that most excellent man, the late Mr. Price of Foxley, whose extraordinary character I shall always revere, kindly condescended to employ his pencil, which, in the opinion of the best judges, was equal to things of a much superior nature, in making several drawings from the plants themselves; and a very able hand has supplied the rest, and engraved them all.

We leave this note as a tribute of respect to the memory of Mr. Price; but the reader will have perceived that we have given new

hoped that gentlemen at least will not be so incurious as to remain ignorant of what imports them so much to know. Nor is the mere botanist less concerned in the success of this scheme; for there is great reason to think that many of the grasses are not thoroughly settled, varieties perhaps being put for different species †; now this uncertainty can never be cleared up except by sowing the same kind of seeds on different soils.

and more scientific plates of the principal grasses at the time of flowering.

† Thus Gmelin, Flor. Lapp. mentions four of the meadow grasses which he says have for a long time perplexed botanists of great reputation. And the Editor of Ray's Synopsis, p. 402, doubts whether five grasses which are put down as different by Petiver be not only varieties of a grass mentioned before. I have many specimens of this grass in my collection, differing in colour, stature, and outward aspect, which yet most likely, are of the same species.

A TABLE OF ENGLISH GRASSES *.

GENUS 1.

VERNAL grass. *Plate* 1, ... Anthoxanthum *odoratum*.
H. 10. R. 398. 1.

GENUS 2.

MAT grass ..... Nardus *stricta*.
H. 20. R. 393. 2.

GENUS 3.

Manured..... CANARY grass ..... Phalaris *canariensis*.
H. 20. R. 394.

Sea ..... CANARY ..... Phalaris *arenaria*.
H. 21. R. 398. 4.

Reed ..... CANARY †..... Phalaris *arundinacea*.
H. 21. R. 400. 1.

Ribband ..... CANARY ..... Phalaris *ibid.* 6 *ibid.*

* The Editor gives Mr. Stillingfleet's Table of Grasses as it was originally printed. Where Mr. Stillingfleet mistook or misapplied the name, or where a different name is used by subsequent botanists, he has given a particular reference to the additional observations communicated by Professor Martyn, with the letters (A. O.)

H. refers to Hudson's Flora Britannica.

R. ..... Ray, Ed. 3.

A. O..... to the Additional Observations.

† The *Reed* CANARY, Phalaris *arundinacea*; and *Ribband* CANARY Phalaris, *ib.* are the same species. A. O.

GENUS 4.

Green ..... PANIC grass ..... Panicum *viride.*
H. 21. R. 393. 1.

Loose ..... PANIC ..... Panicum *crusgalli.*
H. 22. R. 394. 2.

Cock's-foot ..... PANIC ..... Panicum *sanguinale.*
H. 22. R. 399. 2.

Creeping ..... PANIC ..... Panicum *dactylon.*
H. 22. R. 399. 1.

GENUS 5.

Meadow ..... CAT'S-TAIL grass, *Plate* 2, *No.* 1. Phleum *pratense.*
H. 22. R. 398. 1.

Branched ..... CAT'S-TAIL ..... Phleum *paniculatum.*
H. 23.

Bulbous ..... CAT'S-TAIL ..... Phleum *nodosum.*
H. 23. R. 398. 3.

GENUS 6.

Meadow ..... FOX-TAIL grass. *Plate* 2, *No.* 2.. Alopecurus *pratensis.*
H. 23. R. 396. 1.

Field ..... FOX-TAIL ..... Alopecurus *myosuroides.*
H. 23. R. 397. (A. O.)

Bulbous ..... FOX-TAIL *. ..... Alopecurus *bulbosus.*
H. 24. R. 397. 3.

Flote ..... FOX-TAIL ..... Alopecurus *geniculatus.*
H. 24. R. 396. 2.

GENUS 7.

FEATHER grass ..... Stipa *pennata.*
H. 24. R. 393. 3.

GENUS 8.

Smooth ..... COCK'S FOOT grass ..... Dactylis *cynosuroides* †.
H. 25. R. 393. 4.

Rough ..... COCK'S-FOOT, *Plate* 3 ..... Dactylis *glomerata.*
H. 25. R. 400. 2.

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* A variety of *Meadow* FOX-TAIL.

† Dactylis *stricta.* (A. O.)

GENUS 9.

Millet grass ..... Milium *effusum*.
H. 25. R. 402. 1.

GENUS 10.

Silky ..... Bent grass ..... Agrostis *spica-venti*.
H. 25. R. 405. 17.

Brown ..... Bent ..... Agrostis *canina* *.
H. 26.

Red ..... Bent ..... Agrostis *rubra* †.
H. 26. R. 394. 4.

Creeping ..... Bent ..... Agrostis *stolonifera*.
H. 27. R. 402. 2.

Marsh ..... Bent ..... Agrostis *palustris* ‡.
H. 27. R. 404. 11.

Fine ..... Bent, *Plate* 4, *No.* 1 ..... Agrostis *capillaris* §.
H. 27. R. 402. 4.

Wood ..... Bent ‖ ..... Agrostis *sylvatica*.
H. 28. R. 404. 13.

Small ..... Bent ..... Agrostis *minima*.
H. 28. R. Appendix.

GENUS 11.

Crested ..... Hair grass ..... Aira *cristata* ¶.
H. 28. R. 396. 3.

Purple ..... Hair ..... Aira *cærulea* ǂ.
H. 29. R. 404. 8.

Water ..... Hair ..... Aira *aquatica*.
H. 29. R. 402. 3.

Turfy ..... Hair ..... Aira *cespitosa*.
H. 29. R. 403. 5.

Mountain ..... Hair, *Plate* 5, *No.* 1 ..... Aira *flexuosa*.
H. 30. R. 407. 8. 9.

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* Agrostis *vinealis*. (A. O.)

† Milium *lendigerum*. (A. O.)

‡ Agrostis *alba*. (A. O.)

§ A. *vulgaris*. A. *canina*. (A. O.)

‖ A variety of the preceding.

¶ Poa *cristata*. (A. O.) Purple.

ǂ Melica *cærulea*.

Small-leaved ..HAIR.....Aira *setacea**.
H. 30.

Grey .....HAIR.....Aira *canescens.*
H. 30. R. 405. 16.

Early .....HAIR.....Aira *præcox.*
H. 31. R. 407. 10.

Silver .....HAIR, *Plate* 5. *No.* 2.....Aira *caryophillea.*
H. 31. R. 407. 7.

GENUS 12.

MELIC grass.....Melica *nutans* †.
H. 31. R. 403. 6.

GENUS 13.

Middle.....QUAKING grass.....Briza *media.*
H. 32. R. 412. 1.

Small .....QUAKING .....Briza *minor.*
H. 32. R. 412. 2.

GENUS 14.

Water .....MEADOW grass.....Poa *aquatica.*
H. 32. R. 411. 13.

Common .....MEADOW, *Plate* 6. .....Poa *trivialis.*
H. 33. R. 409. 2.

Great .....MEADOW, *Plate* 7. .....Poa *pratensis.*
H. 33. R. 409. 3.

Creeping .....MEADOW .....Poa *compressa.*
H. 33. R. 409. 5.

Narrow-leaved MEADOW.....Poa *angustifolia* ‡.
H. 34. R. 409. 4.

Bulbous.....MEADOW.....Poa *bulbosa.*
H. 34. R. 411. 12.

Hair-leaved....MEADOW.....Poa *setacea* §.
H. 34.

Annual.....MEADOW, *Plate* 8.....Poa *annua.*
H. 34. R. 408.

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* Aira *montana*, a variety of A. *flexuosa.* (A. O.)

† Melica *uniflora.* (A. O.)

‡ Poa *nemoralis.* (A. O.)

§ A variety of Poa *trivialis.* (A. O.)

Wood ..... MEADOW ..... Poa *nemoralis*.
H. 34.

Sea ..... MEADOW ..... Poa *maritima*.
H. 35. R. 410. 7.

Hard ..... MEADOW ..... Poa *rigida*.
H. 35. R. 410. 8.

Spiked ..... MEADOW ..... Poa *loliacea*.
H. 35. R. 395. 4.

GENUS 15.

Sheep's ..... FESCUE grass, *Plate* 9. ..... Festuca *ovina*.
H. 36. R. 410. 9.

FESCUE ..... Festuca *vivipara*.
Ibid. b.

Purple ..... FESCUE *, *Plate* 10, *No.* 1 ..... Festuca *duriuscula* *.
H. 36.

Hard ..... FESCUE, *Plate* 10, *No.* 2. ..... Festuca *rubra*.
H. 36. R. 413. 4.

Barren ..... FESCUE ..... Festuca *bromoides*.
H. 37. R. 415. 13.

Wall ..... FESCUE ..... Festuca *myurus*.
H. 37. R. 411. 16.

Tall ..... FESCUE ..... Festuca *elatior*.
H. 37. R. 411. 15.

Small ..... FESCUE ..... Festuca *decumbens* †.
H. 38. R. 408. 11.

Flote ..... FESCUE, *Plate* 11. ..... Festuca *fluitans* ‡.
H. 38. R. 412. 17.

Spiked ..... FESCUE ..... Festuca *loliacea*.
H. 38.

Wood ..... FESCUE ..... Festuca *sylvatica* §.
H. 38. R. 394.

GENUS 16.

Field ..... BROME grass ..... Bromus *secalinus*.
H. 39. R. 413. 5; 414. 7. 8.

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* Mr. Stillingfleet mistook the Festuca *duriuscula* for the F. *rubra*. See note on the Hard Fescue in the next Chapter, and the Additional Observations.

† Poa *decumbens*. (A. O.)

‡ Poa *fluitans*. (A. O.)

§ Bromus *sylvaticus*. (A. O.)

Corn.....BROME.....Bromus *arvensis*.
H. 39. R. 414. 9.

Upright.....BROME.....Bromus *erectus*.
H. 39.

Wall.....BROME.....Bromus *ciliatus* *.
H. 40. R. 413. 2.

Barren.....BROME.....Bromus *sterilis*.
H. 40. R. 412. 1.

Tall.....BROME.....Bromus *giganteus* †.
H. 40. R. 415. 11.

Wood.....BROME.....Bromus *ramosus* ‡.
H. 40. R. 415. 11.

Spiked.....BROME.....Bromus *pinnatus*.
H. 41. R. 392.

GENUS 17.

Naked.....OAT grass §.....Avena *nuda*.
H. 41. R. 389. *b*.

Bearded.....OAT.....Avena *fatua*.
H. 41. R. 389. 7.

Meadow.....OAT.....Avena *pratensis*.
H. 42. R. 405. 1.

Rough.....OAT.....Avena *pubescens*.
H. 42. R. 406. 2.

Tall.....OAT, *Plate* 12.....Avena *elatior* ||.
H. 42. R. 406. 4.

Yellow.....OAT, *Plate* 13.....Avena *flavescens*.
H. 42. R. 407. 5.

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* Bromus *dimidius*. (A. O.)

† Festuca *gigantea*. (A. O.)

‡ Bromus *asper* and *hirsutus*. Great confusion has arisen from the difficulty of discriminating the different species of this Genus Bromus, which has been finally cleared up by Dr. Smith in his Observations on the Genus, in the Linnæan Transactions, vol. IV.

§ This is adopted by Stillingfleet, through a mistake, as a native. Wheat, Barley, and Oats, are arranged as *Gramina* by Linnæus; but in Theophrastus they are called σιτηροι *frumentacea*; and in English, different species of Corn. As it has never yet been found in a native state, we cannot claim it as one of our grasses. S.

|| Holcus *avenaceus*. Smith. (A. O.) art. Avena *elatior*, p. 342.

GENUS 18.

Common.....REED grass.....Arundo *phragmites*.
H. 43. R. 401. 1.

Branched.....REED.....Arundo *calamagrostis*.
H. 43. R. 401. 2.

Small.....REED.....Arundo *epigeios*.
H. 43. R. 401. 3.

Sea.....REED.....Arundo *arenaria*.
H. 43. R. 393. 1.

GENUS 19.

Perennial.....DARNEL*, *Plate* 14, *No.* 1.....Lolium *perenne*.
H. 44. R. 395. 2.

Annual.....DARNEL.....Lolium *temulentum*.
H. 44. R. 395. 1.

GENUS 20.

LYME grass.....Elymus *arenarius*.
H. 44. R. 390. 3.

GENUS 21.

Common.....WHEAT grass.....Triticum *repens*.
H. 45. R. 390. 1.

Bearded.....WHEAT.....Triticum *caninum*.
H. 45. R. 390. 2.

Sea.....WHEAT.....Triticum *junceum*.
H. 45. R. 391. 6.

GENUS 22.

BARLEY grass.....Hordeum *murinum*.
H. 46. R. 392. 3.

GENUS 23.

RYE grass†.....Secale *villosum*.
H. 46. R. 392. 4.

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* Ray or Rye grass.

† This Plant is omitted by subsequent Botanists, because it is not a native of Great Britain. See an excellent engraving of it in Smith's superb Flora Græca, plate 97. See also Elymus *europæus*, Hordeum *sylvaticum*, *Wood* LYME grass. (A. O.)

GENUS 24.

Crested ..... Dog's-tail, *Plate 2, No. 2* ..... Cynosurus *cristatus.*
H. 47. R. 398. 2; 399. 3.

Rough ..... Dog's-tail ..... Cynosurus *echinatus.*
H. 47. R. 397. 5.

Blue ..... Dog's-tail ..... Cynosurus *cæruleus* *.
H. 47. R. 399. 4.

Bearded ..... Dog's-tail ..... Cynosurus *paniceus* †.
H. 47. R. 396. 4.

GENUS 25.

Soft grass ..... Holcus *lanatus.*
H. 374. R. 404. 14.

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* Sesleria *cærulea.* (A. O.)

† Phleum *crinitum.* (A. O.)

SECTION III.

Brief notices of some of the most profitable Grasses—Order of flowering—Some Directions for laying down to grass.

Genus the First. VERNAL * Grass. *Plate* I. p. 268.

THIS Grass grows very commonly on dry hills, and likewise on sound rich meadow-land. It is one of the earliest grasses we have, and from its being found on such kinds of pastures as sheep are fond of, and from whence excellent mutton comes, it is most likely to be a good grass for sheep-pastures. It grows to a large size in rich wet meadows, gives a grateful odour to hay, and communicates an agreeable scent to linen if kept in drawers. It is proper for parks; for in that of Felbrig, Norfolk, where it abounds, the venison is remarkably fine. This grass I have found on all kinds of ground, from the most sandy and dry to the most stiff, and even in bogs. It is very plentiful in the best meadows about London, *viz.* towards Hampstead and Hendon; it is very easy to gather, as I have found by experience, for it sheds its seeds on the least rubbing †.

* Sweet VERNAL; Martyn. Sweet-scented VERNAL; Curtis.

† We submit to the Reader the observations of Mr. Sole on this grass, written in his peculiar style.

ANTHOXANTHUM *odoratum.*

"This grass, like the rough *cock's-foot*, is always to be found in

Genus the Sixth. *Meadow* FOX-TAIL. p. 269.

This grass, as well as the foregoing, is found in great plenty in our best meadows about London *, and I believe makes very good hay. Linnæus says, that it is a proper grass to sow on grounds that have been drained. I am informed that the best hay which comes to London is from the meadows where this grass abounds. I saw this Spring a meadow not far from Hampstead, which consisted of this grass chiefly, with some of the vernal grass and the corn-brome grass. This grass is scarce in many parts of England, particularly Herefordshire,

flower in pastures that are well stocked; which leads me to conclude it is not over-relished by cattle in general, and therefore not deserving of the great character which some authors have given of it, merely on account of its fragrance, which perhaps is the reason why brutes reject it; since we see that sweet-meats pall *our* appetites instead of affording nourishment. It also affects poor sandy grounds; and is found very sparingly in our rich pastures about Laycock, Melksham, and Chippenham; but abundantly on the sandy soil of Spy Park, Wraxall, and our poor land under the Sham Castle, and the two Starve-alls. Yet it might do very well sown in the ratio of one eighth; for though we cannot dine on sugar, yet it has its use." Transactions of the Bath Agricultural Society. Sole's Account of Grasses, vol. IX. p. 137.

* In the finest hay that comes to London, observes Mr. Stillingfleet in another place, are *Anthoxanthum odoratum*, *Cynosurus cristatus*, *Avena flavescens*, *Agrostis capillaris*, *Bromus secalinus*, *Alopecurus pratensis*, and *Poa trivialis*.

Berkshire, and Norfolk. It might be gathered at almost any time of the year from hay-ricks, as it does not shed its seeds without rubbing, which is the case of but few grasses.

Water FOX-TAIL *. p. 269.

This is also found in the meadows about town, that are sound but lie under water in the Winter; and perhaps might be proper to sow on such grounds.

Genus the Tenth. *Marsh* BENT. p. 270.

This grass grows very commonly in moist grounds and ditches in many parts of England where I have been. I shall say more of it under article *Flote* FESCUE grass.

Fine BENT. *Plate* IV. *No.* 1. p. 270.

This grass I have always found in great plenty on the best sheep-pastures; as on Malvern-hills, and on all the high grounds in Herefordshire, that are remarkable for good mutton. I may add on Bagshot-heath, and the best sheep-pastures in Berkshire, Oxfordshire, and Norfolk.

* This species is not enumerated in the Table, and is either the *Flote fescue*, or a variety of it. A. O.

Genus the Eleventh. *Mountain* HAIR Grass. *Pl.* V. *No.* 1. p. 270.

The same may be said of this Grass as of the foregoing. It grows in great plenty on Bagshot-heath.

Silver HAIR Grass. *Plate* V. *No.* 2. p. 271.

This is also found on the same kind of pastures as the foregoing.

Turfy HAIR Grass. p. 270.

I know nothing of this grass, but from the relation of a curious Swedish Gentleman, who tells me that it is a regular part of husbandry in Dalecarlia to sow the seeds of this species for grazing bullocks; and that they thrive extremely upon such pastures. It grows on moist, cold, and low meadows, and therefore must certainly be worth trial, especially upon so good a testimony, and where the water cannot be carried off.

Genus the Fourteenth.

Great and *narrow-leaved* MEADOW Grass. *Pl.* IV. p. 271.

These grasses are common in our best meadow-grounds, and I believe make good pasture and hay. I have found them frequently on banks by the road side, and near ditches, even where they were not to be found in the adjoining meadows and pastures.

Annual MEADOW Grass. *Plate* VIII. p. 271.

This grass makes the finest turfs. It grows every where by way sides, and on rich sound commons. It is called in some parts the Suffolk grass. I have seen whole fields of it in High Suffolk without any mixture of other grasses; and as some of the best salt butter we have in London comes from that county, it is most likely to be the best grass for the dairy. I have seen a whole park in Suffolk covered with this grass; but whether it affords good venison I cannot tell, having never tasted any from it. I should rather think not, and that the best pasture for sheep is also the best for deer. However this wants trial. I remarked on Malvern-hill something particular in relation to this grass. A walk that was made there for the convenience of the water-drinkers, in less than a year was covered in many places with it, though I could not find one single plant of it besides in any part of the hill. This was, no doubt, owing to the frequent treading *, which above all things makes this grass flourish; and therefore it is evident that rolling must be very serviceable to it.

It has been objected, that this grass is not free from bents, by which word is meant the flowering stems.

* In his Practical Observations on Grasses, p. 29, Mr. Curtis calls it the Dwarf Meadow, and observes, "it is frequent on the edges of paths, where its seeds being scattered quickly vegetate, and, where it is not overpowered by more luxuriant herbage, not flourishing from being trodden on, as Mr. Stillingfleet has supposed."

I answer, that this is most certainly true, and that there is no grass without them. But the flowers and stems do not grow so soon brown as those of other grasses, and being much shorter they do not cover the radical leaves so much; therefore this grass affords a more agreeable turf without mowing, than any other whatever that I know of. The quantity of milk and butter produced whilst cows fed on a close of this grass in Mr. Blair's farm in Essex was taken notice of for twenty years; and the loss of it by breaking up the land was very sensibly felt.

I got a good deal of the seed, which deserves the name of manna-seeds, equally with the *flote fescue;* for it is very sweet, and I observed numbers of bees gathering honey from it. This circumstance I have not seen mentioned, though it may be very common.

Sheep's Fescue. *Plate* IX. p. 272.

This is the grass so much esteemed in Sweden for sheep.

Gmelin, Flor. Sibir. says that the Tartars choose to fix during the Summer in those places where there is the greatest plenty of this grass; because it affords a most wholesome nourishment to all kinds of cattle, but chiefly sheep; and he observes that the sepulchral monuments of the antient Tartars are mostly found in places that

abound with this grass, which shews, adds he, that it has long been valued amongst them. I have among my grasses a specimen, but do not remember where I found it. I am certain it is not common in any of the places where I have been. Perhaps upon examination it may be found on places famous for our best mutton, as Banstead Downs, Church-Stretton in Shropshire, some parts of Wales, &c.

I have since found this grass in great plenty in many parts of England and Wales; indeed on all the finest sheep-pastures in Herefordshire, Berkshire, Oxfordshire, Norfolk, &c. It abounds on Newmarket-heath, and forms a most beautiful turf. The reason why I thought it not common, was, that it is an early grass, and had shed its seeds, before I usually made my searches in those places where it grows. I must also observe that, contrary to what Linnæus says, either the sheep, or some other animals, do eat the flowering stems of this grass; for upon Banstead-downs there was nothing to be seen but the radical leaves, unless amongst the bushes near the hedges, where it was guarded from the sheep *.

* One of the excellencies of this plant is that it will grow upon such soils as hardly any other good kind of grass will live upon. And although the farmer cannot from these expect a crop equal to the produce of his richer fields, yet it is no small convenience to have a plant for covering the most barren spots, which, without this care, might have remained bare many years.

Anderson's Annals of Agriculture, vol. II. p. 214.

It likewise often continues green during winter. After a long

Genus the Fifteenth. *Purple* FESCUE *. *Pl.* X. p. 272.

This grass I have always found along with the fine BENT and silver HAIR GRASS, particularly on Banstead-downs, in great plenty, in a place inclosed in order to keep the sheep out. From hence I am inclined to think that this is the chief grass all over the Downs; but as the flowering stems in the other parts were entirely gone except along the hedges, I could not be certain.

account of this species he adds: "I have been very particular with regard to this plant, because it promises, on many accounts, to make a most valuable one to the farmer; though it must be added, that in time, even upon rich soils, the spike becomes so close as to check its growth, and for that reason it always forms a dry pasture, much fitter for sheep than cattle. Anderson, p. 216.

* It cannot reflect any discredit on the accuracy of Mr. Stillingfleet, that he, in this instance, fell into the same error as the best Botanists of his time. The purple fescue, or Festuca rubra has, however, been lately ascertained by Mr. Woodward at Yarmouth, where it grows on the shore, being naturally a maritime plant, and consequently not likely to be the chief grass on Banstead-downs, as Mr. Stillingfleet asserts. The place of growth, and his figure T 9, clearly prove that his was the Festuca duriuscula, or hard Fescue, a very common inhabitant of pastures, and often strongly tinged with a red colour.

We have given plates both of the F. duriuscula and F. rubra, from which the observer will plainly see their difference.

Tall FESCUE. p. 272.

This affords the best pasture; and so does Turfy Hair-grass. These were first observed by Mr. Bielke, who took great pains in collecting grass seeds; but without judgment.

Flote FESCUE. *Plate* XI. p. 272.

At Waghen in Holderness I observed thirty or forty acres of the Flote Fescue grass which let for very little. The tenants spoke slightingly of it, though I drew from them that it is extremely nourishing; and one of them particularly told me, that had it not been for this grass they should have had nothing for their cattle and horses the summer before. About Hull there is a great quantity of it; and a farmer told Mr. Bowyer's steward that it gave their horses the water-farcy. But upon further enquiry it appeared that it is too nourishing for horses that did not work, though it was never known to affect horses that do work; but, on the contrary, keeps them in good heart. About one hundred and sixty acres of ground, where much of this grass grows, is let by Mr. Bowyer for 4*l.* a year per acre.

There is a clamminess in the ear of the flote fescue, when the seeds are ripe, which tastes like honey, and for this reason they are probably called manna seeds.

The author of a treatise in the Amœnitates Academicæ, vol. III. entitled, Plantæ Esculentæ, observes, that the seeds of this grass gathered yearly in Poland, are sold in Germany, and sometimes in Sweden, under the name of manna seeds. They are much used at the tables of the great, on account of their nourishing quality and agreeable taste; and I was informed by Dr. Solander that they are made into excellent cakes, and ground and boiled in milk, afford delicious pottage. It is wonderful, adds the same author, that these seeds have been so much neglected among us, since they are so easily gathered and cleansed.

According to Linnæus, Flor. Suec. art. 95, the husks of this grass will cure horses of the botts, if kept from drinking several hours.

Mr. Dean, a very sensible farmer at Ruscombe in Berkshire, assured me that a field always lying under water, of about four acres, that was occupied by his father when he was a boy, was covered with a kind of grass that maintained five farm-horses in good heart from April to the end of harvest, without any other kind of food, and that it yielded more than they could eat. He at my desire brought me some of the grass, which proved to be the flote FESCUE with a mixture of the marsh BENT; whether this last contributes much towards furnishing so good pasture for horses I cannot say. They both throw out roots at the joints of the stalks, and are therefore likely to grow to

a great length. In the index of dubious plants at the end of Ray's Synopsis, there is mention made of a grass under the name of *Gramen caninum supinum longissimum*, growing not far from Salisbury, twenty-four feet long. This must, by its length, be a grass with a creeping stalk; and that there is a grass in Wiltshire growing in watery meadows so valuable that an acre of it lets from ten to twelve pounds, I have been informed by several persons. These circumstances incline me to think it must be the flote Fescue; but whatever grass it be, it certainly must deserve to be inquired after.

This kind of grass in Wiltshire is, I believe, called knot-grass by the inhabitants, from whom my friend Dr. Dampier procured the following account, at my desire: "It grows on a little spot of land in a valley about nine miles from Salisbury, near the villages of Maddington and Shrewton, and close by a farm belonging to Mr. Gore, called Elton, rented by farmer Gray, who chiefly communicated the particulars here recited. The valley (as much of it as concerns the matter in question) is about eight or ten acres, running from East to West. At the upper end of this part of the valley there rises a spring generally a little before Christmas, sometimes not till the beginning of the year, which, flowing down, and lying upon a particular spot (consisting of near an acre and a half), during two, three, and sometimes four months, produces a grass which runs along the ground eighteen, often twenty, feet long, sticking, with its fibrous knots, upon the moss, very

rich, thick, and sweet. It is mowed about the end of May, when the surface of the land is dry. It grows in such abundance that the mowers are obliged to make two swarths, or a double cutting of it; and moreover they have two crops of it. The stalk of this grass, when in its perfection, is as big, according to farmer Gray's expressions, as the small end of a tobacco-pipe, and so very sweet that the sheep choose it beyond the best hay from other places. Cattle soon grow fat with it; and horses, when they eat of it, froth at the mouth from its delicious juiciness.' The spring at the upper side of the valley, which contributes to the produce of this extraordinary grass, does not always rise yearly, and consequently the crop sometimes fails; but what is most remarkable is, that the water flowing from this spring first covers two or three acres of land, which is not rendered more than commonly fertile by it, before it reaches the spot of about an acre and a half above-mentioned, which is so enriched by it, that the Clergyman of the parish has been known to refuse three guineas for the tithe. The water is three or four feet high, and runs in great plenty; and the parts of the end of the valley, that it runs down upon from the above-mentioned particular fruitful spot, abound in the same sort of knot-grass; and at the end of the valley there are also other springs which rise more constantly than the spring at the upper end, and where they flow, they cause a fruitfulness, but not equal to what I have before spoken of *.

* Mr. Stillingfleet here alludes to the famous Orcheston Meadow,

Genus the Seventeenth. *Yellow* OAT. p. 273.

This grass is found in great plenty in some grounds where the sheep's FESCUE, the fine BENT, and the crested DOG-TAIL grow, and therefore likely to be good for sheep. It is also not uncommon in good meadows.

of which we subjoin an account communicated by Professor Martyn. It was once supposed that this grass was the Agrostis stolonifera, one of the worst kinds; however it has at length been ascertained that the famous long grass of Orcheston is not a species peculiar to the spot; but that the meadow is composed of many species which commonly grow in other places.

Mr. Curtis had five turfs sent him from this meadow, which he planted in his garden at Lambeth-marsh. Poa trivialis, or rough-stalked Meadow-grass, appeared in all the six. Agrostis palustris, or marsh Bent, in three; Alopecurus pratensis, or meadow Fox-tail, in two; Triticum repens, or common wheat grass, p. 271. alias couch, quich, in four; And Avena elatior, or tall oat-grass, in one. Hence he reasonably concludes, that the extraordinary fertility of this meadow arises, not from any grass peculiar to it, but from several unusual circumstances concurring, and favouring, in an uncommon degree, the growth of certain well-known grasses.

A friend of Mr. Swayne being on the spot when the meadow was mowing, and having been directed to the *real long grass* by the farmer and labourers, brought away Alopecurus pratensis, or meadow Fox-tail. The year following Mr. Swayne himself visited Orcheston the first week in June: the greater part of the meadow was then mown. The standing part, about a quarter of an acre, presented a thick and beautiful assemblage of the flowering panicles of Poa trivialis. It was lodged or lying on the ground, had put forth roots at the knots, and began to be erect only at the last knot or two.

Genus the Nineteenth. *Perennial* DARNEL.
Pl. XIV. p. 274.

This grass is well known, and cultivated all over England; and it is to be hoped the success we have had with it will in time encourage our farmers to take the same pains about some others that are no less valuable, and are full as easy to be separated. It makes a most excellent turf on sound rich land where it will remain.

Mr. Swayne remarks, that no grasses but such as flower early, could be in bloom at the first mowing; and that whatever grasses are in flower at the last mowing must be of the late-flowering kinds. So that Agrostis stolonifera, or creeping bent, which Mr. Sole determined to be the Orcheston grass, might be predominant at the time of the latter mowing.

Dr. Maton visiting Orcheston on the 15th of August, found Holcus lanatus, or meadow soft-grass, Lolium perenne, or ray-grass, and Agrostis stolonifera, all pretty nearly of the same length, measuring about seven feet. They usually rise, as he understood, about sixteen or seventeen inches before they fall, and run along the ground in knots, which knots send forth shoots into the interstices of the pebbles. In June, he adds, Triticum repens, Avena elatior, Alopecurus pratensis, and Poa trivialis, are seen thriving similarly to the species above mentioned. He speaks of having specimens of the last measuring near ten feet in length; and of some of the spikes of Triticum repens having between forty and fifty glumæ.

Here we have no less than eight species of grass ascertained to grow in this meadow; and there is little doubt but that several more would be found, if it were duly searched whilst the herbage was standing.

Orcheston St. Mary is about eleven miles from Salisbury. The meadow is about half a mile from Shrewton, in the lowest part of a

If I may judge by the venison I have eat out of a paddock that was chiefly filled with this grass, I would by no means recommend it for parks. I know it will be said that venison is never good out of a paddock, that the deer must have room to range, trees to browse on, &c. &c. I grant there is some reason for saying this, but I believe in general it is more owing to want of proper food, *viz.* good grass, than merely to confinement; for paddocks are generally made by converting

very narrow winding valley, sheltered on each side by gradual acclivities of chalk. This valley forms a channel for the floods which come down from Tilshead, about three miles distant, in the winter season. This meadow being the lowest of the range, the water rests there to some depth; and indeed it is hardly otherwise than swampy throughout the year. There is one spring not half a mile distant, and therefore the water by which the meadow is often submerged, may at first be of a higher temperature than the surrounding atmosphere. The earlier the springs swell, the more plentiful is the succeeding crop of grass. A bed of small loose pebbles, of a siliceous nature, with a scanty covering of mould, formed from the decomposed relics of vegetables, constitutes the immediate soil.

Maton in Linn. Trans. vol. V. p. 28.

In addition to the remarks on this singular variety of grasses, we refer the reader to two Memoirs by the Rev. Dr. W. Richardson, on an Irish grass, which he calls Fiorin, much resembling this celebrated Orcheston grass, in its properties and luxuriant growth. It is not sufficiently ascertained to what class it belongs, being by some compared to the Agrostis stolonifera, and by others to the Festuca pratensis. Though its qualities may perhaps be over-rated, it certainly deserves the attention of agriculturists. One of these memoirs was printed in the sixth volume of Communications of the Board of Agriculture; and the other among the Transactions of the Belfast Literary Society.

some rich spot near the house, that has constantly been manured, and of course is full of grasses fitter for the dairy or the stable than for deer, which hardly ever is the case of large parks. No man will, I suppose, pretend to make good pork from a hog fed with grains instead of peas, though he has the liberty of choosing as much ground as he pleases, and where he pleases. This grass is called in many countries *rye* grass. It were to be wished that the old name might prevail, because there is a genus of grass, *viz.* the 23d, known by the name of *rye* grass, all over the kingdom, of which genus there is a species that ought to bear the same generical name *.

* In the time of Mr. Stillingfleet there was great confusion in regard to this Genus, the Lolium of Linnæus, which he in vain endeavoured to clear up. Subsequent Botanists found still greater difficulties in ascertaining this point, and the obscurity was not ultimately removed till the publication of Dr. Smith's Flora Britannica.

The Lolium *perenne* is by him ascertained to be the perennial darnel of Stillingfleet; the Red Darnel of Withering, the real rye, or rather ray grass.

The Lolium *temulentum* is the annual darnel of Stillingfleet, and the bearded darnel of Smith.

See Additional Observations, art. Lolium perenne. L. temulentum, and Elymus Europæus.

The *Lolium perenne*, though depreciated by some writers, is strongly recommended by practical farmers. Mr. Sole observes, it is an excellent grass both for pasture and hay. "Clean hay," he adds, "from this grass, is preferable for race-horses and hunters, as it does not affect their wind; and although it runs to bent, yet the juice is so concentrated as to afford greater nourishment than twice

I have since eaten venison out of a large park where there was much of this grass, and it was no better than that out of the paddock. Hence I should be apt to think that this grass would not be proper for sheep, as I have always observed that the same kind of ground which yields good venison yields good mutton. For what particular uses it is good remains to be tried, whether for

the quantity of common hay. It suits most of the strong fields about Bath. Mr. Coome had a fine crop of it last Summer, and his horses are so very fond of it as to prefer it to clean corn." Bath Transactions, p. 149.

It is likewise strongly recommended by Marshal in the chapter on the cultivated Grasses in the Vale of Gloucester; and the prejudices entertained against it, as if it choaked all other grasses, shewn to have no foundation. Rural Œconomy of Gloucestershire, vol. I. p. 159. 169. He only cautions the husbandman against sowing it in too great quantities; and adds, "A nutritious bite in the spring and autumn is certainly better than a want of it. By sowing a *small* quantity of ray-grass, and keeping this closely pastured in the spring, the summer grasses natural to the soil have little more impediment to their rising than they would have if no ray-grass were sown.

Mr. Ricards, Secretary to the Bath Agricultural Society, sells the seed of this species, which in the Western counties is known by the name of Peesey's perennial ray-grass, from its discoverer, a capital farmer of Cledglow, near Tetbury. To draw attention, and raise it in the estimation of the public, it was sold at *10s. 6d.* a bushel; but, when this price had produced the effect of bringing the grass into more general cultivation, it was gradually reduced to the present average of *7s. 6d.* a bushel.

The grass is cultivated in large quantities, and regularly threshed. It is mixed with clover, at the rate of a bushel or bushel and a half to fourteen pounds of clover *per* acre; but if sown alone, three bushels *per* acre.

the dairy, for fatting cattle, or for horses. Many are tempted by the facility of procuring the seed of this grass to lay down grounds near their houses where they want to have a fine turf; for which purpose, unless the soil be very rich, a worse grass cannot be sown, as it will certainly die off in a few years.

Genus the Twentieth. LYME *Grass, Upright-sea.* p. 274.

This, with Carex *arenaria*, binds moving sands far from the sea, and proves very advantageous for this purpose.

Genus the Twenty-fourth. *Crested* Dog-tail.
Plate II. No. 2. p. 275.

This grass, I imagine, is proper for parks. I know one * where this abounds that is famous for excellent venison. It may perhaps be as good for sheep.

That it is good for sheep I have found since by experience. The best mutton I have tasted, next to that

* He means Felbrig; and in another place observes: "The park at Felbrig is full of the vernal grass, festuca ovina, cynosurus cristatus, with a little darnel."

The park at Gunton full of darnel, with some vernal. The difference of the grasses will account for the difference of the venison. That at Gunton is very ordinary; that at Felbrig remarkably good. This confirms my observation about the darnel, in relation to venison, in my book.

which comes from hills where the purple and sheep's fescue, the fine bent, and the silver-hair grasses abound, having been from sheep fed with it.

It makes a very fine turf upon dry sandy or chalky soils, as I have seen in many parts of Berkshire; but unless swept over with the scythe, its flowering stems will look brown; which is the case of all grasses which are not fed by variety of animals. For that some animals will eat the flowering stems is evident by commons where scarcely any parts of grasses appear but the radical leaves. The seeds may be gathered near a month. It sheds the seed before the cat's-tail is ripe; and that grass begins to ripen when the hawthorn-berry is red.

Directions for preparing Land proposed to be laid down with Grass-seed which was sown to White Clover the Summer before.

PLOUGH the land in March as deep as the nature of the soil will admit. Harrow after the weeds are about flowering, *viz.* some time in May, or sooner, if it be a forward Spring. Plough about ten days after it is harrowed. Harrow when the weeds are come up again. Lay down dung or compost. Plough in a moderate depth immediately, so that the teeth of the harrow, after rolling, may reach it. Roll the land down every day as

it is ploughed with a light roller, and observe not to spread the dung long before it is ploughed in. When the weeds come up that are produced by the dung, harrow the land well, so as to bring up the dung, and mix it with the soil, observing not to harrow more at once than can be ploughed in a day. Plough it up after the harrows the same depth as before, and follow the plough with a roller. The land will now be under the proper preparation for the seeds, which may be sown after the first soaking rain from the end of August to the end of September, in the following manner. Plough the land about the same depth as before. Harrow it once in a place, and sow the seeds after the harrow; then with a bushed hurdle harrow the seeds in. When the plants appear, roll the land with a light roller, and not before, except the weather prove very dry, in which case it will be necessary to roll it with a very light roller after the bush-harrow. A light dropping of good manure laid on with the first frost will be of great use in preserving the grass early in the season, and encouraging its growth afterwards. A light roller used after every frost will be of great service the first winter.

THERE is no part in the œconomy of farming more difficult than to fix on the fittest time for hay-harvest; as the finest crops are often spoiled by being cut either too early or too late; but most often in the latter case. The

usual rule for mowing is when the ear is in blow; for at that time the leaves begin to wither, and turn yellow, and no longer grow, as the nourishment is principally diverted to ripen the seeds. Those grasses indeed whose seeds are of consequence, as the field brome, or the tall oat, may be suffered to stand a little longer; but in general I am certain, that grasses which are not mowed till the blow is over will never produce a good crop, unless when the meadow contains various kinds that come into ear at very distant times. With this view I subjoin the order in which the grasses come into ear *.

* The blue dog's-tail grass, according to Curtis, is the most early of the British grasses, and the vernal the next in succession. Perhaps in strictness of speech this is the fact; but probably Mr. Stillingfleet mentions the annual meadow as the first in ear, because it flowers occasionally even in winter, when the weather is mild, and therefore some of the ears are always in bloom early in the spring; though he allows that with the other poas the end of June is its usual time for blowing. According to Dr. Smith it is found in bloom from March to November.

Order in which the Grasses usually come into Ear.

Annual MEADOW ..... POA *Annua.*
Meadow FOXTAIL..... ALOPECURUS *pratensis.*
[*Sweet*] VERNAL ..... ANTHOXANTHUM *odoratum.*
Great MEADOW'..... POA *pratensis.*
Narrow-leaved MEADOW POA *angustifolia* [*nemòralis.*]
Crested DOG'S-TAIL .... CYNOSURUS *cristatus.*
Sheep's FESCUE ..... FESTUCA *Ovina.*
Purple FESCUE : .... } FESTUCA *duriuscula.*
[should be *Hard.*] }
Fine BENT..... AGROSTIS *capillaris* [*vulgaris* or *canina.*]
Marsh BENT..... AGROSTIS *pratensis* [*alba.*]
Fine HAIR..... AIRA *caryophillea.*
Yellow OAT ..... AVENA *flavescens.*
Flote FESCUE ..... FESTUCA [POA] *fluitans.*

The whole time from the beginning of May till about the middle of June.

Ει—κεν και σμικρον επι σμικρῳ καλαθῳσι
Και θαμα τωθ' ἑρδοις, ταχα κεν μεγα και το γενοιτο *,
HESIOD.

THIS table cannot be considered as otherwise than imperfect in some respects; for it is extremely difficult to ascertain the precise time of flowering, as well because

* Perhaps this adage from old Hesiod may be most expressively rendered by one of our vulgar though just proverbs:
"Many a little makes a mickle."

many of the grasses continue in flower during several months, and some, as the VERNAL, even in the winter, when the weather is mild; as because they blow earlier or later, according to the nature of the soil, climate, situation, and quality or quantity of manure. From several memoranda among Mr. Stillingfleet's manuscripts, on the time of flowering and maturity of the seeds, it is evident that he intended to have formed a more extensive and specific table. These are, however, not sufficient to enable the editor to fulfil that intention, and too imperfect to be printed. He must therefore refer the botanical reader, in general, to Professor Martyn's additional observations, to Withering, and to Dr. Smith's Flora Britannica, in which the time of coming into ear is noticed under each species.

It may not however be superfluous to add, that if a close is designed for hay, it should consist of only one grass, or at least of such as are ripe, and fit for the scythe at the same time; but if for feeding, then a succession of the best grasses, from the earliest to the latest, is desirable as affording a constant fresh bite.

Of our native grasses Mr. Stillingfleet noticed twenty-five genera, and ninety-five species, of which only one genus, the secale villosum, has been struck out by succeeding botanists, and some of the species proved to be varieties. Dr. Withering has twenty-eight genera, and one hundred and twenty-two species. Curtis, twenty-five genera, and an hundred and twenty-three species;

but he suspects that several of these will be proved to be varieties. Dr. Smith has enumerated twenty-eight genera and an hundred and seventeen species. Probably future researches will add to this catalogue, particularly as in the last edition of the Species Plantarum, by Wildenow, he makes the whole number of grasses (including the foreign) to amount to fifty-three genera, and six hundred and sixty-one species. The reader who is not a botanist, will doubtless be surprized at this extraordinary number of species which are by farmers all confounded under the common name of grass; and all must admire the beneficence of Providence in giving so many varieties of a plant which forms the common covering of the earth, and is as necessary to existence as agreeable to the eye.

Anthoxanthum odoratum.

1

Phleum pratense.

2

Alopecurus pratensis.

Dactylis glomerata.

1

Agrostis capillaris *L.*
vulgaris *Sm.*

2

Cynosurus cristatus.

Aira flexuosa. *Aira caryophyllea.*

Poa trivialis.

Poa pratensis

Poa annua

Festuca ovina

Festuca duriuscula A. rubra Linn.

Plate 10 nº 2

Festuca fluitans Linn
Sea fluitans Sm.

Avena flavescens.

Lolium perenne *Hordeum pratense*

Festuca pratensis.

Bromus mollis.

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